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ABSTRACT

This literature review compares international and New Zealand research and international program information on teacher competencies and preservice and inservice teacher education, addressing two issues: (1) what literature identifies as key competencies required by quality beginning and practicing teachers in the current social, economic, and educational climate and (2) which international and New Zealand teacher education programs are best practice sites and what characterizes their definition of teacher competencies, student intake, program design and delivery, funding, and regulatory environment. The report examines: the project; the policy context (the complexity of teaching, impact of changing environments, and complexity of teaching); competence (attributing competency from performance, the uncertain nature of teaching, generic competencies, a broader view of competence, and unresolved issues); competencies required for teaching (knowledge base, self competence, competencies derived from school curriculum requirements, competencies derived from assessment, competencies for entry to teacher education, and competency in the U.S., United Kingdom, and New Zealand); teacher education standards (in the United Kingdom, U.S., and New Zealand); trends in teacher education in the U.S., United Kingdom, Europe, Canada, Australia, and Asia-Pacific Region; trends in teacher education in New Zealand; and relating teacher competencies to teacher education (complexity of competency, paucity of best practice sites, and implications for New Zealand's teacher education). An appendix presents the proposed revised requirements for all courses of initial teacher training from the Teacher Training Agency in the United Kingdom. (SM)

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# Teacher Competencies and Teacher Education:

## A Descriptive Literature Review

Patrick Fitzsimons
and
Penny Fenwick
New Zealand Council
for Educational Research

A Report Commissioned by the
New Zealand Ministry of Education

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Patrick Fitzsimons and Penny Fenwick
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# Executive summary

- This literature review is concerned with competencies, performances and standards in relation to teacher education, but the meanings of those terms appear to be somewhat elusive.
- The most fundamental claim that can be made on the basis of this literature review is that teachers need to know about *what* they teach (subject matter knowledge), and they also need to know *how* to teach that subject matter (pedagogical content knowledge).
- Although competencies in themselves are important and necessary, they may nevertheless be insufficient to capture the unpredictability, complexity and dynamism that characterise effective teaching.
- At various times, atomistic lists of competences have been generated from other arenas in society (e.g., economics and management) and applied to education as a set of decontextualised statements. There is no support in the literature for that type of application to education.
- There is considerable support for the professional rather than the technicist approach, as it takes a much broader view of competence, eschews reductionist ideas, includes the wider issues of commitment and self-regulation, and emphasises reflection, cognition, morality and autonomy. What each of these notions means, however, is a matter of creative contest.
- A skill-oriented or task-driven approach may entice both instruction and assessment into becoming overly occupationally-specific, so that, at best, only a weak basis exists for people to transfer achieved competencies into different occupations. An account of competencies that is limited to performance is therefore problematic.
- There is an important difference between output definitions such as 'classroom control' or other observed behaviours recorded on school practice report forms, and definitions of competence that include inputs such as interpersonal skills, knowledge of subject, reflectivity, vocational commitment and personal maturity.
- It is worth noting a distinctive difference between the United Kingdom and the United States. The latter seems to be pursuing a path that emphasises subject specialist schemes, in contrast with the generic approach of the former.

- There is considerable support for the idea that there is no cogent argument against competency standards in the professions when those competency standards are integrated and holistic.
- Teachers' self-perceptions are also considered important in explaining teacher competence.
- Assessment has the potential to shape the content and method of what should be taught, and could be seen as a catalyst for shaping teacher competencies.
- The idea of performance-related pay, based on competencies that were evidenced in exam success by students, would be a problematic notion indeed for many teachers in predominantly working-class areas.
- The efforts in various countries to define generic and standardised competencies show how quickly and easily they degenerate into first-order check-lists, with all the problems inherent in behaviourism. Where the competencies are approached in a broader fashion, there seems to be a greater possibility that the competencies will relate to the uncertain and particular nature of teaching. In their broader definition, then, competencies lend themselves more to professional standards.
- In Australia, policymakers are attempting to define teachers' working knowledge in terms of competencies that will form the foundation of award restructuring, both for teachers' careers and for their students in industry. There is a tension between professionalising tendencies, stemming from the beliefs, values and practices of people active in universities, professional associations, unions, school systems and some schools, and de-professionalising tendencies, stemming from economic rationalist beliefs, values and practices.
- Underlying much of the thinking about teacher competence is the assumption that pre-service programmes should produce fully trained teachers, an idea that has appeal both to members of the profession and to employers, but is at odds with the expectations of graduates in other professions such as medicine and law.
- Reform of teaching has been identified as integral to the reform of education systems.
- Teaching is considered to lack clear specifications as to the characteristics of effectiveness, and the question 'what makes a good teacher?' must be addressed with reference to the context in which teaching takes place. This does not mean, however, that no specifications can be derived.

- Most writers caution against an overemphasis on empirical evidence as the sole basis for knowledge about teaching. This parallels concerns about the technical orientation that dominates the professions and current efforts to improve teacher education.
- Shulman's (1987) work is presented here at some length, his ideas being central to a large number of writers on competency in teaching (see the appendix to this volume). His views also appear to be representative of many other writers.
- Shulman's notion of reflection, however, has been discounted as acontextual and uncritical by those calling for a more reflexive teacher education process. The argument hinges on the problem of conceiving of theory and practice as separate realms.
- There are strong claims that teachers should enter professional teacher training after they have completed an initial broad-based university degree.
- The NZQA QUALSET project has been a key move in trying to establish teacher education qualifications based on the National Qualifications Framework.
- The common trend in the changing pattern of initial teacher education throughout mainland Europe is its increasing incorporation into the university sector, along with the recognition that teachers need a thorough professional training, with a solid theoretical base to complement the hands-on of practice.
- There is a consensus that teacher education should be treated as the beginning of a learning process: it must allow novices to explore a range of ideas and practices under guidance, rather than to acquire the limited set of knowledge and skills they can master in the available time.
- Most OECD countries are extending pre-service education requirements and internships, while also seeking to deepen in-service learning opportunities. The same is true of Asian countries. Australia, Japan, Chinese Taipei and New Zealand are moving towards five-year programmes of teacher preparation, usually including greater study of teaching and learning, and a sustained and intensive internship or practicum component.
- It seems important to distinguish between the teacher competence necessary to graduate and begin teaching as a novice teacher, and the wider competence and confidence that comes with classroom and school experience. The latter is fully attainable only when novice teachers have had the

opportunity to have the full responsibility of teaching their own students, answer for their own professional decisions, and demonstrate an ability to learn from the experience.

- Provision needs to be made for the support of teacher development to continue in the two years of professionally guided service as provisionally registered teachers. We must not be pushed into providing all the nuts and bolts of classroom management prior to graduation. It is more important to produce graduates who are thinking, open-minded, resourceful practitioners.
- A key implication of the literature review is that the Ministry of Education should consider diversifying the provision of teacher education programmes.

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# Glossary

**AACTE**: American Association of Colleges for Teacher Education

**DEETYA**: Department of Education and Employment and Youth Affairs (Australia)

**ERO**: Education Review Office

**ETSA**: Education and Training Support Agency

**INTASC**: Interstate New Teacher Assessment and Support Consortium (USA)

**ITE**: Initial Teacher Education

**K-12**: Kindergarten to year 12

**NCATE**: National Council for Accreditation of Teacher Education (USA)

**NQF**: National Qualifications Framework (New Zealand)

**NVQ**: National Vocational Qualifications (United Kingdom)

**NZQA**: New Zealand Qualifications Authority

**OECD**: Organisation for Economic Co-operation and Development

**QUALSET**: Qualifications Standards for Education in Teaching (New Zealand)

**TRB**: Teacher Registration Board (New Zealand)

**TTA**: Teacher Training Agency (United Kingdom)

# The project

To assist with the preparation of a green paper on teacher education, the Ministry of Education contracted NZCER to complete a review of the international and New Zealand literature and international programme documentation, focusing on the relationship between teacher competencies and pre-service and in-service teacher education programmes.

The questions that the literature review addresses are:

- What does the international research literature identify as the key competencies required by quality beginning and practising teachers in the current social, economic and educational climate?
- Which international and New Zealand teacher education programmes (pre-service and in-service) might be defined as best practice sites, and what characterises their definition of teacher competencies, their student intake, programme design and delivery, funding, and regulatory environment?

This is a descriptive literature review, which compares international and New Zealand research and international programme information. It is confined to teachers in the compulsory schooling sector, excluding early childhood and tertiary education.

# The policy context

## The complexity of teaching

The question 'what makes a good teacher?' cannot be answered without reference to the context in which the teacher teaches and their interaction with that environment. Already a complex profession and, like many other professions, requiring a multiplicity of roles, teaching is becoming even more complex because of changes in the broader social, economic and cultural environment, and the way in which teaching has changed to address the needs of students and society in this environment.

Teachers' roles today have been said to include elements of custodianship and social welfare, developing work skills and social skills, transmitting heritage knowledge, cultural traditions and values, as well as creating new knowledge and encouraging the enjoyment of learning (McQueen, 1996). Principals' roles too have increased in complexity (Wylie, 1997).

## The impact of the changing social, economic and cultural environment

The repeated themes of the late twentieth century are increasing social diversity and more rapid economic and technological change. For New Zealand teachers this means:

### Cultural diversity in the classroom

Increased numbers of students in New Zealand classrooms are from migrant and non-English-speaking backgrounds, and an increased proportion of students are Maori and Pacific Island. Education statistics for 1995 indicate that approximately 20 percent of primary and secondary students are Maori, 7 percent are Pacific Island, and 8 percent are from non-English-speaking backgrounds. The cumulative effect is that about a third of primary and secondary students now have migrant, non-English-speaking, Maori or Pacific Island backgrounds. Geographical clustering, of course, means that in many upper North Island schools, the proportion is much higher.

### Higher skills levels expected

Most students, not just the few of previous generations, are now expected to reach the higher skill levels being required more generally in the population. There have been many rapid and profound changes to Western economies over recent years. In response, New Zealand's industrial and education policies and legislation have led to structural reforms with strong implications for educators. These include the policy of Learning for Life, the Industry Training Strategy and the development of Industry Training Organisations, the establishment of the Education and Training Support Agency, the New Zealand Qualifications Authority, and Skill New Zealand, as well as workplace reform and the Employment Contracts Act.

Parents, employers and students expect that schools will play a strong part in the development of work-related skills, including the essential generic skills of working in teams, independent thought, time management and enquiry skills.

### Emphasis on information-seeking skills

There is increased emphasis on information-seeking skills because of the short shelf-life of new information, contrasted with the economic and technological imperative of developing knowledge industries and knowledge workers. In particular, teachers today find their own educational experience and life skills are less useful to them in the classroom than were those of their counterparts in earlier generations. As Wilson and Ball (1996) comment:

> ... the gap has widened between what prospective teachers bring with them from their own experiences in school and the kind of teaching for which they are preparing (pp.124-125).

Life-long learning is a concept that applies equally to teachers and students. Teachers are now required both to develop knowledge-seeking skills in their students and to pursue actively the continual updating of their own knowledge and skills through in-service education.

### Other influences

Increasingly, what happens outside the classroom influences students' learning. The spread and diversity of information technology and multi-media mean that the teacher is only one of a number of (sometimes contradictory) sources of information.

The age profile of New Zealand teachers is particularly relevant here, as it is to the issue of continual updating of knowledge. In 1992 the mean age of both men and women teaching in primary, area and secondary schools was over 40 years, with the lowest mean being 40.7 years for women primary teachers, and the highest being 43.3 years for women area school teachers (Slyfield, 1993).

### Emphasis on quality

Increased emphasis on the quality of educational outcomes means greater accountability for teachers, manifest in performance appraisal systems, national cohort and transition-point assessment, indicator monitoring etc.

### Consumer choice

There is increased emphasis on parental responsibility for children's education, parental involvement in school governance and parental choice of school. Whether or not parental choice actually exists, and some research information indicates that it may be more apparent than real (Lauder et al, 1995), the policy emphasis on parental choice means that teachers today are employed in a market where competition amongst providers for clients is encouraged.

### Increasing expenditure on education

Roll growth, due to demographic factors and the retention of increased numbers of students to higher levels of the education system, reinforces the Government's desire to contain education expenditure through increased efficiencies. Government expenditure on education as a proportion of total Government net expenditure increased from 11.9 percent for the 1984/85 financial year to an estimated 16.1 percent for the 1995/96 financial year.

Primary school rolls in particular are increasing at present - by 2.6 percent (4.5 percent in the Auckland region) between July 1995 and July 1996. The retention of students at the upper levels of secondary school and into tertiary study has increased considerably in New Zealand in the last decade. By 1994 37.0 percent of 15-24 year olds were in formal education, exceeding the OECD country mean of 34.7 percent.

### Changing employment conditions

As a result of the education reforms, the employing body for teachers became the board of trustees of their school. However, their conditions of employment and salaries continue to be negotiated by strong central unions, and overall, teachers may have experienced less change in employment conditions in recent years than many other workers. Opportunities for boards of trustees as employers to vary centrally determined pay and conditions remain modest compared to many other industries.

## The complexity of the teaching task

The education system has responded to these economic, social and cultural changes by:

### Strengthening the curriculum

The range and sophistication of curriculum statements has increased. *The New Zealand Curriculum Framework* requires all students to advance in all of the seven essential learning areas until the end of Year 10, and national curriculum statements for these seven areas are progressively replacing the existing syllabi.

### Strengthening the assessment of learning

There is greater specificity in the statements about what students are expected to know at what age. The Curriculum identifies eight progressive levels of achievement objectives, and the Ministry of Education is presently investigating the introduction of national transition-point assessment. At secondary school, the progressive implementation of the National Qualifications Framework will record students' learning achievements. Assessment methodologies are generally becoming more complex and requiring greater sophistication and understanding by teachers.

### Increasing teacher accountability

The regulation of teacher standards has been strengthened, and performance appraisal systems introduced for teachers. The 1996 Education Amendment Act requires the Teacher Registration Board to specify the criteria to be used to determine whether a teacher is satisfactory, and the Board expects to complete its consultation on these criteria and promulgate them by mid 1997.

Following negotiation with the teacher unions, the mandatory requirements for the assessment of teacher performance were promulgated in December 1996 and came into effect on 1 January 1997. A series of Guidelines on Performance Management Systems are now being promulgated, and training programmes are in place for boards and principals.

### Enhancing schools' accountability

The Education Review Office defines its primary purpose as supporting and promoting improvement in the quality of education through regular, independent, high-quality evaluation reports. ERO's portfolio of reviews includes accountability reporting, effectiveness reporting, evaluation services and ministerial services. Its focus over the last few years has been on the quality of governance by boards of trustees, the quality of leadership and management provided by principals, and the quality of classroom teaching (Education Review Office, 1996).

Public disclosure of individual school review reports has strengthened the accountability regime.

## Conclusion

Despite these responses to the changing environment, 'what makes a good teacher' remains a highly contested issue. As Lieberman and Miller (1990) put it:

> The sad fact is that, as a profession, we have not been able to codify teaching under a variety of contingencies in a way that is satisfying to practitioners. The knowledge base in teaching is weak; there is simply no consensus (as there is in medicine and law) about what is basic to the practice of the profession (p.154).

Given the complexity of teachers' roles in the approach to the twenty-first century, it is understandable that the Government should want to work towards greater specification of the competencies expected of teachers, and to identify the types of teacher education programmes (both pre-service and in-service) that encourage teachers to develop and demonstrate these competencies. A useful starting point for such an analysis is the international research literature, and in particular the identification of best practice internationally. The report discusses some issues raised by various writers on the whole question of competence, and reviews the international literature on teacher competencies. Following a discussion on teacher standards and an outline of current trends in teacher education, the concluding section focuses on the relationship between teacher competencies and teacher education.

# The question of competence

The key terms in this literature review are 'competencies', 'performances' and 'standards' in relation to teacher education. According to Knight and McWilliam (1995), there is currently considerable 'official' pressure to reframe the knowledge base of teachers, including beginning teachers, as competency-based standards. In New Zealand, as a result of a public inquiry, there has been a long-standing call to clearly identify teaching skills and competencies (Scott, 1985).

Two New Zealand commentators, Gibbs and Aitken (1996), argue however that terms such as 'standards' and 'competence' appear to be somewhat elusive. One problem relates to a confusion in the use of the terms 'competency' (which is the singular form of 'competencies') and 'competence' (which is the singular form of 'competences'). They say that competencies apply to specific performances or aspects of activities (i.e., they convey a dispositional approach to performance), while competences refer to broad groups of general capacities (i.e., competence is viewed in terms of capacity). The distinction is important, they say, because in overlooking such differences, the debate (about standards) has been weakened by confusion and equivocation.

Many of the more mundane but necessary routines teachers are required to carry out can be included in what Carr (1993) describes as single-track actions. These typically include such tasks as writing on whiteboards, filling out request forms, recording student attendance, and collecting money. There are, however, obvious shortcomings with focusing only on such examples of competency in order to identify a competent teacher.

### The problem of attributing competency from performance

Several writers caution against an overemphasis on empirical evidence as the sole basis for knowledge about teaching. This parallels concerns about the technical orientation that dominates the professions and current efforts to improve teacher education. Various writers (e.g., Combleth, 1986; Henderson, 1988; Schon, 1983) point out that results from interpretive and critical studies provide knowledge about other significant aspects of teaching, such as the moral, aesthetic, political, and personal dimensions. According to Lather (1986), the failure to include this type of knowledge distorts and limits our understanding of teaching. From this point of view, knowledge about teaching is not separate from actual practice; it is coextensive. Rather than drawing on a 'storehouse' of knowledge discovered by outside experts, such practical knowledge, Ayers (1988) argues, is created by the teachers themselves.

Writers also argue that teaching involves uncertain ways of proceeding, or there is often no known outcome. Under these circumstances, teacher educators and teachers themselves may look to teachers in action for clues about what constitutes teaching. Observed behaviour is thought to provide the data. Writers refer to this as 'learning beside Nellie', but most caution against limiting teacher education to this approach.

It is difficult to find out how to be a teacher, or what the purpose of teaching is, from actually watching what teachers do. What is observed depends on the way teaching is defined. To decide first what teaching is and then observe it is circular - the observer has already decided. The problem is that when teachers decide to observe something, they have already decided what to pay attention to. In other words, they have a theory of observation. They select a few items to observe from among the many millions of bits of information they could possibly pay attention to. So on what basis is competency to be inferred?

Gibbs and Aitken (1996) consider that the obvious consequences of a skill-oriented or task-driven approach to the specification of standards are that it may encourage teaching towards the assessment, produce assessment practices that lead to assessment saturation, and cause teaching to become inevitably disconnected and fragmented. Furthermore, such a skill-oriented or task-driven approach may entice both instruction and assessment into becoming overly occupationally-specific, so that, at best, only a weak basis exists for people to transfer achieved competencies into different occupations. Knight and McWilliam (1995) argue that such approaches are derived from the factory floor, and have within them the potential for an inappropriate 'hands on, minds off' attitude to teacher education.

Reynolds and Salters (1995) argue that performance (from which competence is inferred) results from decisions grounded in values. Interpretation of a situation is essential if professional action is going to make sense. Interpretation, however, depends upon perception, which is impregnated with theories. These theories affect perception and action. The ability to formulate valid theories depends upon a legitimate background of knowledge. The implication is that knowledge and understanding arise in the context of experience and subsequent appraisal of that experience. In other words, it is a process. The point is that an account of competencies that is limited to performance is problematic.

### The problem of the uncertain nature of teaching

Gibbs and Aitken (1996) argue that although the competencies in themselves are important and necessary, they may nevertheless be insufficient to capture the unpredictability, complexity and dynamism that characterise effective teaching. Competencies, narrowly defined, ignore the important contribution of an individual's attributes (such as knowledge, rational judgement and attitudes) and how these interact and influence performance. Because actions are prescribed as discrete performance outcomes, this approach does not account for the transformations that may occur when the discrete outcomes are considered collectively. Nor is this narrow approach necessarily concerned with the connections between key tasks (or intentional actions), or the transactional effects between key tasks, participants and contexts. Yet if we consider effective teaching to be more than unrelated actions, these relationships are fundamental to the assessment of such a complex, dynamic and unpredictable professional activity.

According to Annesley (1992), teaching lacks clear specifications as to the characteristics of effectiveness. She points out that 132 different skills and behaviours manifested by teachers have

been identified as being effective. Clearly it would be difficult to design an evaluation system that measured all these factors.

Archer (1983) argues that teaching is constrained by resource limitations, social, economic and political pressures, institutional frameworks, moral and ethical considerations, and policy decisions. He claims that the very idea of teaching competencies and the criteria for evaluating them must take into account the wider context within which they are situated.

If teacher educators agree on the knowledge needed, and the rigour with which it is to be incorporated into teacher preparation, these developments might lead to added course content and experiences that extend beyond the current programmes (AACTE, 1983; Howey and Zimpher, 1986). That agreement is yet to be gained, although the current attempts at generic competencies appear to have that aim.

### Generic competencies

Brown (1996) says that it is worth noting a distinctive difference between the approaches adopted in the United Kingdom and the United States. The latter seems to be pursuing a path that emphasises subject specialist schemes in contrast with the generic approach of the former. In the area of teacher education with which she is most familiar (science), the National Board for Professional Teaching Standards in the US has produced a framework of certificates for science standards in middle childhood, early adolescence and adolescence, and young adulthood. Comparable frameworks are in place for other academic subjects, counselling, vocational education etc. The lists of standards are subject-specific, but in other ways comparable to the UK competences, and are supplemented by assessment design and exercises. In addition, the National Science Foundation provides Education Standards in science for students' learning, teaching, assessment, learning environments, planning and professional development. Unlike in the UK, of course, none of these national schemes are compulsory. Individual States make the decisions about what is required of teacher education. There is now an attempt by a National Commission in the United States to draw up national standards (see Darling-Hammond, 1996a).

Beyond this is the professional rather than the technicist approach, which takes a much broader view of competence, shuns reductionist ideas, includes the wider issues of commitment and self-regulation, and emphasises reflection, cognition, morality and autonomy. The problems associated with this stance include the diversity of views about what counts as good teaching, difficulties in agreeing on appropriate ways of assessing teaching qualities, and considerable potential for a lack of shared understanding between teachers about what is being assessed and how this should be done. In practice, this more ambitious interpretation of competences has been displayed in the official prescriptions. It has been suggested that some of them are vastly over-ambitious for the preparation of beginning teachers and indeed even experienced ones.

Brown (1996) further argues that these concerns arise from a sense that teacher educators have been swept along with 'official' constructs of competence, which some have regarded as crude

behaviourist concepts or mechanistic prescriptions of the occupation we call teaching. These essentially atomistic lists of competences have been generated from other arenas in society (e.g., economics and management) and applied to education as a set of decontextualised statements. From this, it seems that assessment of student teachers would be expected to depend on the demonstration of certain behaviours (e.g., in classroom teaching or written assignments) that would be independent of the contextual features of the schools. But social circumstances and the quality of support for student teachers can be very different in different schools. Factors such as the proportion of children with learning difficulties or the adequacy of resources can vary markedly, and thus challenge the notion of a common set of characteristics that compromise high-quality teaching across all contexts.

### Towards a broader view of competence

Gibbs and Aitken (1996) point out that the limitations associated with the skill-oriented approach have led from a reliance on somewhat prescriptive first-order measures, which focus on performance alone as a measure of competent teaching, towards those higher-level measures that focus on the beliefs, knowledge and understandings that underlie and inform performance. A fundamental premise is that teachers need to know about *what* they teach (subject matter knowledge), and they also need to know *how* to teach that subject matter (pedagogical content knowledge - see e.g., Shulman, 1987). In this regard, Gibbs and Aitken (1996) concur with the US National Board for Professional Teaching Standards, which stresses the importance of teacher knowledge as a form of knowledge.

According to Gibbs and Aitken (1996), accomplished teachers already command specialised knowledge of how to convey and reveal subject matter to students. They are aware of the preconception and background knowledge that students typically bring to each subject, and of strategies and instructional materials that can be of assistance. They understand where difficulties are likely to arise, and modify their practice accordingly. Their instructional repertoire allows them to create multiple paths to the subjects they teach, and they are adept at teaching students to pose and solve their own problems.

Tomlinson (1995) agrees, and says that a preferable replacement for behaviourist assumptions is to be found in the modern work on skilled expertise, which is compatible with the traditional meaning of competence as capacity to achieve purpose. These competences can be profiled. On the other hand, Cameron (1996) warns of the problems associated with such methods of assessing teachers. She points out that US teachers invest 70 or more hours, and $2000, in preparing their profiles for National Board Certification.

Profiling competences (see e.g., Tomlinson, 1995) could be seen primarily as a means of engaging student teachers in consciously directing the processes through which they were learning to become teachers. This also implies a responsibility for beginning teachers to give accounts of their own practice, but also provides an opportunity to debate and challenge the validity and appropriateness

of the profile of competences. An approach of this kind offers support and empowerment to student teachers in their development, the chance to understand better the process of 'learning to be a teacher', and personal ownership of their profile of competences, which openly illustrates the whole panoply of their strengths, weaknesses and uncertainties. The profile inevitably becomes a flexible agent, which can develop from its original form in ways that are most effective for the student teacher's own learning.

Dilworth and Imig (1995b) argue that teacher educators have been using an implicit competence-based model for the appraisal of professional readiness. In this traditional framework, the first principle is that teaching competence is taken as a construct and not something that can be observed directly. Teacher educators are likely to acknowledge the inferential leap from observed consistencies, such as 'frames lessons well', to a construct, 'good teaching', which they would say accounts for that consistency. If educators were to train and assess people explicitly in terms of competencies, they would need more explicit evidence to support their claims.

The second principle is that educators have assumed that measures of competence cannot deal only with outputs. That is, definitions of competent teaching cannot be restricted to those behaviours in which competence may be said to inhere, and from which competence can supposedly be directly inferred. There is an important difference between output definitions such as 'classroom control' or other observed behaviours recorded on school practice report forms, and those definitions of competence that include inputs such as interpersonal skills, knowledge of subject, reflectivity, vocational commitment and personal maturity.

Hager (1994) says there is no cogent argument against competency standards in the professions when those competency standards are integrated and holistic. He cites Wolf, who argues that there is no bifurcation between education and competence. Wolf takes this to mean that competency-based education is compatible with the learning of higher-order skills, the acquisition of generalisable knowledge (and understanding), and with broad-based courses. Wolf's reasons for supporting this position include:

- Competence is a construct, and not something that we can observe directly, but so too is knowledge. We already infer whether a student's knowledge is adequate from their performances on various assessments.
- What we know of the structure of the mind shows the importance of a variety of cognitive abilities. Knowledge recall is only the start. Far from involving practice without theory, competence takes us beyond lower cognitive abilities, such as recall, to higher cognitive abilities, such as synthesis and application of knowledge.
- Knowing not just that something is done, but why it is done, is crucial; that is, 'knowing' something involves knowing when to access it, and being able to do so when appropriate - even if it is only in an examination room.

Hager (1994) says that according to the integrated conception, competence is conceptualised in terms of knowledge, abilities, skills and attitudes displayed in the context of a carefully chosen set of realistic professional tasks (intentional actions), which are of an appropriate level of generality. A feature of this integrated approach is that it avoids the problem of a myriad of tasks by selecting key tasks that are central to the practice of the profession. The main attributes required for the competent performance of these key tasks are then identified. Experience has shown that, when both of these elements are integrated to produce competency standards, the results do capture the holistic richness of professional practice. The relative complexity of the actions can be gauged from the fact that a typical profession involves no more than 30 to 40 such key intentional actions. Competence is inferred by assessing the performance of those actions.

Flexibility is also seen as important. Moore (1996) warns of the dangers of student teachers perceiving lists of competences as a 'manual' for teaching, or 'instructions' which, if followed, will ensure that all will go well. If things do not go well, the student teacher will probably see the problem as being their own lack of competence. But there are, of course, many reasons embedded in the system and in local circumstances that are central to explanations of why things go wrong. It is essential that reflection is not simply a self-blaming activity, which lacks analysis of this complex thing we call 'teaching' in real and often uncertain contexts.

### Some unresolved issues

Hustler and McIntyre (1996) quote Brown, who characterises competences as not so much a developing debate but 'more in the realm of exchanges between defence lawyers and law enforcers', with a tendency to the reactive rather than the pro-active. Brown suggests that this anxiety or unease is expressed in at least four ways by educators:

- Will we be engulfed by, taken in by, identified with: simple-minded 'official' constructs of competence; crude behaviourist concepts or mechanistic prescriptions for occupations; armchair polemicist views; Total Quality Management approaches; competence models from other (e.g. economics and management) contexts; atomistic models of competence; decontextualised statements about competence?
- Will we be able to: maintain and reconstruct our concepts of teacher professionalism; avoid straightforward prescriptions for 'best practice' and continue to include the broader views - critical, evaluative, reflective, analytical, personal qualities, attitudes, understandings, commitments, values - and is it appropriate to include these within the construct of competence; go beyond performance as inferred by the other qualities; describe differences in quality rather than be trapped in minimum competence?
- Will the competences: focus only on outcomes and be directly translated into assessment systems; commandeer virtually all the Initial Teacher Training curriculum rather than be treated as just the minimum requirement; turn out to be a way of edging out the moral practice, cognitive and interpersonal aspects of teaching, i.e., drown ideas about the complexity of teachers' work

and the multifaceted nature of learning to teach; ignore the processes of children's and student teachers' learning; be seen as very attractive, especially in their simplest forms, to everyone outside the teacher education in-group?

- Where do ideas about competences to be identified come from: beliefs (government, ultra-Right) about competent practitioners; collective views about competent practitioners; job descriptions, statements of aims; functional analysis - specific/generic lists of competences; analysis of professional processes or roles; civil servant armchair exercises; political assertions?

In another publication, Brown (1996) argues that the competences for teacher-based education are (erroneously in her view) decontextualised and general. There is no list of those seen as constituting good practice in, say, science or mathematics teaching, let alone science or mathematics teaching in different contexts or of different age groups. The competences have to be recontextualised, therefore, into the various subject areas and stages of teaching. This view is supported by many other writers (see e.g., Shulman, 1987; Nance and Fawns, 1993; Reynolds, 1992; Hager, 1994; Gibbs and Aitken, 1996). That recontextualisation may be difficult, as the wide range of environments in which teaching occurs will certainly have a high multiplier effect which will make the list of competences much longer.[1] As well as this practical effect, however, there are fears that the framework of generalised competences, with their transformations to specific performance in subject teaching, will take precedence over the theories developed over the years about what characterises good teaching in different areas of the curriculum. The suitability of prospective teachers will be assessed on the basis of some generalised non-specialist prescription from a central authority, not on the criteria that are grounded in experience and the study of subject-based or stage-based education.

Brown (1996) raises the question of whether, within competence-based schemes, the concepts of teachers' professionalism can be maintained. She wonders if what she calls simple-minded prescriptions for 'best practice' competences in the classroom can be diverted and enhanced to include broad views of critical, evaluative, reflective, analytical, attitudinal abilities, understandings, commitments, values and other personal qualities we look for in a teacher? Can we describe differences in quality rather than be trapped in assessing performance as minimum competence?

This is, of course, a statement of a particular view of teaching, which asserts that professional knowledge can never be fully predetermined. From this perspective, the role of the teacher educator is to prepare the prospective teacher for a life's work of creating new knowledge to underpin and further develop the craft of their teaching. The notion that professional performance could be

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[1] See Appendix.

reduced to a technical level in terms of a set of observable behaviours is inevitably problematic. Fears are generated that such an approach will focus only on behavioural outcomes, which are translated directly into assessment systems. Far from being treated just as a minimum requirement, they could commandeer the teacher education curriculum and edge out issues of moral practice, cognitive and personal aspects of teaching, and ideas about the complexities of learning to teach. All of this could sideline the importance of the processes of learning, but could also be seen as very attractive (especially in its simplest forms) to managers, civil servants, policymakers and others outside teacher education.

Brown (1996) also argues that even if the general idea of competences is accepted, interpretations vary considerably. At one end of the continuum there is the behaviourist concept of the reduction of teaching to a set of observable performances. This appeals to those who are particularly concerned to establish accountability and a uniform system across the country. It is criticised by others as fragmenting teacher education and destroying the coherence of programmes. This reductionist version does not appear, however, in the realities of the competence frameworks that have been nationally prescribed. It is possible, of course, to supplement this technicist approach with assessment of those aspects of knowledge that underpin performance but are not necessarily revealed in its observation. Those institutions who have taken competence models on board more or less mechanically probably use this dual approach to assessment.

What then is competence or a competent teacher, and where do competences come from? The sources for data include: job descriptions; empirical collections of views about what makes a good teacher; student teachers' opinions, based on their experiences in schools; political assertions; functional analyses; and deliberations about beliefs by government officials. Each of these sources opens up the question of competing values. Every 'fact' employed to promote or underpin a competence, is chosen on the basis of a prior value. Whose values, therefore, will emerge? This suggests that competence is a political idea whose time has arrived. Brown (1996), for instance, argues that the liberal teacher educator will see the opportunity for a coercive State to take control of this exercise, reduce the autonomy of the profession, rest the approval of courses on their co-operation with the official competence schemes, and require both assessment of student teachers and external accountability to be enacted within the framework.

If the assessment of competence were to be constructed as merely a technical activity, devoid of politics, scientific knowledge, and an appreciation of ethical debate and aesthetics, one possible result would be a privileging of practice within the teaching profession, and any questions other than

practical ones would be precluded. The conditions that create the possibility for critical evaluations would therefore be missing. That would reduce teaching to a non-profession.

There are thus, difficult questions about how the competences of teaching are to be defined and deployed. These issues are addressed in the next section.

# What competencies are required for teaching?

## The knowledge base

Critical decisions about the content and structure of teacher education, policies and procedures for demonstrating the quality of programmes, standards used in evaluating teachers, and systems for assessing and certifying professional competence, all depend, in part, on the way this question is perceived and answered. Thus, the importance of understanding the issues involved in defining the knowledge base should not be underestimated. At one level, concern about the knowledge base focuses on improving the respect and status accorded teaching, thereby making it a more rewarding career (Shulman, 1987). In this regard, the professionalisation of teaching depends on showing that teaching, like other learned professions, requires mastery of a specialised body of knowledge that is applied with ethical concern. Edelfelt (1980) suggests that the problem of finding some basis for agreement about the definition and organisation of the professional knowledge base remains one of the main challenges in this field.

Beyond the interest in achieving professional status, questions about appropriate knowledge imply the need for deliberation in the professional community about the types of knowledge required and the relationships among the categories identified; conceptual frameworks for organising and using knowledge; and the modes of inquiry used in creating and validating knowledge claims in the field. Developed in this way, the intellectual and socio-political aspects of the field would be complementary.

This means that the process of determining the knowledge base is communal, i.e., conceptual frameworks, and the norms for judging them, are created and recreated socially. Changes occur, with new insights and evaluations, through the co-operative efforts of the entire community. Although leaders in the field usually initiate this process, they seek mutual understanding within the community. Valli and Tom (1988) argue that attempts to resolve differences in perspective require critical reflection and discussion of alternative conceptualisations - both their limits and their possibilities.

A well-defined knowledge base might give impetus to calls for change in the curriculum, resulting in substantially different pre-service and beginning teacher programmes (Krajewski, Mayfield and Walden, 1979; Smith, 1982). Furthermore, this could lead to the development and use of 'state of

the art' standards, materials, and techniques (Gardner, 1989). For instance, the US National Council for Accreditation of Teacher Education (NCATE, 1985) has adopted a standard requiring its members to ground their programmes on established and current research, and essential knowledge of sound professional practice. Adherence to this and other standards requires that education faculties address knowledge base questions.

Addressing the problem of conceptualisation, Griffin (1983) has noted that some writers question the legitimacy of defining 'essential' knowledge in teaching, maintaining that adequate definition depends on the ends considered desirable - a matter of values, not science. In contrast, others (e.g., Shulman, 1986 & 1987) have argued that, properly understood, the knowledge base is a framework that consists of several different types of knowledge, including statements about valued ends and the methods used in evaluating or justifying them.

Ayers (1988) poses the problem of scope of definition, expressing concern about defining the knowledge base too narrowly and ignoring context, or too broadly and losing clarity and precision. According to Edelfelt (1980), even if there could be agreement on the essential knowledge and skills involved, these understandings would not apply in all teaching situations, given the variations in schools, pupils, faculties, resources, and administrative leadership.

The findings of research on effective teaching are typically deemed a legitimate part of a knowledge base. And, as Shulman (1987) argues, the actions of both policymakers and teacher educators in the past have been consistent with the formulation that teaching requires basic skills, content knowledge, and general pedagogical skills. Assessments of teachers in most American states consist of some combination of basic-skills tests, an examination of competence in subject matter, and observations in the classroom to ensure that certain kinds of general teaching behaviour are present. In this manner, Shulman argues, teaching is trivialised, its complexities ignored, and its demands diminished: teachers themselves have difficulty in articulating what they know and how they know it.

Shulman (1987) claims that the policy community nevertheless continues to hold that the skills needed for teaching are those identified in the empirical research on teaching effectiveness. This research is conducted within the psychological research tradition. It assumes that complex forms of situation-specific human performance can be understood in terms of the workings of underlying generic processes. In the study of teaching context, the research therefore seeks to identify those

general forms of teaching behaviour that correlate with student performance on standardised tests, whether in descriptive or experimental studies. The investigators who conduct the research realise that important simplifications must be made, but they believe that these are necessary steps for conducting scientific studies. Critical features of teaching, such as the subject matter being taught, the classroom context, the physical and psychological characteristics of the students, or the accomplishment of purposes not readily assessed on standardised tests, are typically ignored in the quest for general principles of effective teaching.

When policymakers have sought 'research-based' definitions of good teaching to serve as the basis for teacher tests or systems of classroom observation, the lists of teacher behaviours identified as effective in the empirical research were translated into the desirable competencies for classroom teachers. They became items on tests or on classroom-observation scales. They were accorded legitimacy because they had been 'confirmed by research'. While the researchers understood the findings to be simplified and incomplete, the policy community accepted them as sufficient for the definition of standards.

Shulman (1987) says that some research has indicated that students achieved more when teachers explicitly informed them of the lesson's objective. This seems like a perfectly reasonable finding. When translated into policy, however, classroom-observation competency-rating scales asked whether the teacher had written the objective on the blackboard and/or directly told the students the objective at the beginning of class. If they had not, they were marked off for failing to demonstrate a desired competency. No effort was made to discover whether the withholding of an objective might have been consistent with the form of the lesson being organised or delivered.

Moreover, those who hold with bifurcating the content and teaching processes have once again introduced into policy what had been merely an act of scholarly convenience and simplification in the research. Teaching processes were thus observed and evaluated without reference to the adequacy or accuracy of the ideas transmitted.

Gibbs and Aitken (1996) argue that teachers require a rich understanding of the subject they teach and an appreciation of how knowledge in their subject is created, organised, linked to other disciplines, and applied to real world settings. While portraying the wisdom of the culture and upholding the value of disciplinary knowledge, they also develop the critical and analytical capacities of their students. Gibbs and Aitken (1996) also discuss various models of teacher knowledge that

are proposed in the literature. They cite Leinhardt and Smith, who describe teacher knowledge as essentially subject knowledge and knowledge about lesson structure. They refer to Elbaz, who suggests five categories of teacher knowledge within a construct of practical knowledge. These categories include knowledge of self, the milieu of teaching, subject matter, curriculum development, and knowledge of instruction. They cite Shulman, and Wilson, Shulman and Richert, as identifying seven categories of teacher knowledge: knowledge of content, pedagogy, curriculum, learners and learning, contexts of schooling, pedagogical content knowledge, and knowledge of educational philosophies, goals and objectives.

Gibbs and Aitken (1996) also argue that there are four predominant areas of teacher knowledge, which can be summarised as knowledge of context; general pedagogical knowledge; pedagogical content knowledge; and subject matter knowledge. They present Grossman's categorisation of knowledge of context, which includes knowledge of the school setting (such as school culture, departmental guidelines, and so on) as well as knowledge of specific students and communities (including students' backgrounds, families, particular strengths and weaknesses, and interests). General pedagogical knowledge includes knowledge and beliefs about learning and learners, knowledge of general principles of instruction (such as wait-time and small group instruction), knowledge and skills related to classroom management, and knowledge and beliefs about the aims and purposes of education.

Grossman (cited in Gibbs and Aitken, 1996) identifies four central components of pedagogical content knowledge: knowledge and beliefs about the purposes of teaching a subject at different grade levels; knowledge of students' understandings and conceptions of particular topics in a subject matter; curricula knowledge, including knowledge of the horizontal and vertical curricula for a subject, and knowledge of the curricula materials available for teaching a particular subject matter; and knowledge of instructional strategies and representations for teaching particular topics, including the various metaphors, experiments, and activities or explanations known to be particularly effective.

In addition, three main kinds of subject matter knowledge are distinguished: knowledge of content, and in particular the major facts and concepts within a field, and the relationships among them; substantive knowledge, which is knowledge about the underlying structures of a field; and syntactic knowledge, which is knowledge about the tools of inquiry associated with the field, through which new knowledge is developed.

It is Gibbs and Aitken's (1996) view that the knowledge base for effective teaching must comprise more than a specific set of skills or competencies, and more than the acquisition of information, although both skills and information are necessary. Knowing how to act does not guarantee that teachers will act, or be willing to act, in accordance with such knowledge. Social learning theory supports the contention that how teachers behave is often better predicted by self-efficacy than by what they are actually capable of accomplishing. Gibbs and Aitken therefore propose that the integration of skills and information, through the mediation of self-knowledge, beliefs and perceptions, is a more authentic representation of the complexity that confronts the competent teacher.

### 'Self' competence

Teachers' self-perceptions are important in explaining teacher competence. According to Gibbs and Aitken (1996), self-perception, and in particular self-efficacy beliefs (the set of personal beliefs that mediates between what a teacher knows, and whether and how they will act on that knowledge), helps explain why some teachers are prepared to persist even when the odds seem stacked against them. It is no surprise, they say, to find that teacher self-efficacy has been demonstrated to be a major predictor of teacher competence, commitment, and job satisfaction. High-efficacy teachers are more likely to encourage parent participation in their children's learning, and to demonstrate a willingness to be creative and to take risks with curriculum innovation.

This correlation of self-efficacy with teacher effectiveness has important implications for the presentation, interpretation, implementation, and assessment of unit standards in teacher education qualifications. Gibbs and Aitken (1996) argue that at best, NZQA unit standards[2] affirm that identified performances have been evidenced by a student teacher within the scope of a qualification's requirements, and that these standards of performance are expected or presumed to continue to be demonstrated once that person becomes a beginning teacher. Against this, they argue that the wealth of findings from social learning theory suggest that such claims about both the predictive nature of performance and the transferability of learning remain highly dubious.

The realisation that self-efficacy is a critical determinant of subsequent competent teaching performance is nevertheless a two-edged sword. On the one hand, assessment activities associated

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[2] See the section on teacher education standards in New Zealand.

with unit standards ought to incorporate the gathering and evaluation of evidence not only about the requisite knowledge and skills, but also about the student teacher's self-efficacy within the associated contexts in which they are typically expected to be demonstrated. On the other hand, the actual assessment of self-efficacy is highly susceptible to reliability error, especially when assessment based on self-reported perceptions becomes linked to a candidate's potential achievement in the course. Furthermore, the fact that few appropriate measures of self-efficacy currently exist remains a challenge for teacher educators, regardless of whether they adopt unit standards within their programmes.

Schon (1983) coined the term 'the reflective practitioner', and described how reflection unifies and extends the more technical aspects of a professional's work. According to Ramsey and Oliver (1995), reflection may be a necessary condition for quality teaching, and it is through reflection that teachers harmonise, integrate and transcend the necessary classroom management skills, the acquisition of a repertoire of models of teaching, and the personal aspects of their teaching, into a style that has meaning for their students.

Knight and McWilliam (1995), however, argue that what it means to reflect on practice is highly contested, and problems of competing definitions, devaluation and misappropriation already abound. They say that the sheer volume of teacher education literature that makes use of the term 'reflective', regardless of ideological orientation, is testimony to this. On the basis of what they see as a false distinction between theory and practice, they argue that the definition of reflection has certainly been discounted as a contextual and uncritical by those calling for a more reflexive teacher education process. Their argument hinges on the problem of conceiving of theory and practice as separate. For example, under a competency discourse, 'being able to' teach is understood as being separate from, and preferable to, 'knowing about' teaching (p. 83). They point to an erroneous bifurcation between 'knowing' and 'doing' (which the 'reflective practitioner' depends upon for reflection), seeing it as undermining the very idea that there is a body of knowledge informing professional development. They ask if competencies are to be construed as improving productivity in education - 'how can one improve productivity in schooling'? In other words, what do schools produce?

### Teacher competencies derived from the requirements of the school curriculum

From the United States, Wilson and Ball (1996) claim that the current reforms pose three significant challenges for teacher educators. First, the reforms are based on changing images of good teaching. Second, the teaching that lies at the heart of the reforms is undetermined and uncertain. Third, there is little theory concerning how beginning teachers learn to teach in the desired ways. They say that

current strategies for improving the quality and outcomes of education involve the articulation of standards pointed at several key parts of the educational system. Subject matter organisations and states have issued curricular standards; teacher assessment standards have been proposed; frameworks for professional development have begun to appear; and there is some talk that all of these standards should be aligned.

Wilson and Ball (1996) argue on the basis of a literature review that the reforms that last are the kinds that are easily added on to the extant system, and since change is risky, a whole new industry of consultancies will spring up to help teachers integrate the changes into current practice. They argue against incremental reform and in favour of radical reform. Beginning teachers need to deconstruct their inherited ideas about teaching, replacing them with a broader array of alternatives. For example, instead of doing what they have always seen teachers do - rushing in to help with difficulties - the teacher might experiment with letting the students cope with confusion; they might decide to work in depth on a single problem instead of covering the whole curriculum, or expect a high level of performance from all students instead of putting them into ability groups. The argument is that teaching now is more complex than it used to be, and that the gap in the rhetoric of teacher standards and classroom reality is based on the novelty of the rhetoric. Because teaching more resembles jazz than the enactment of a Shakespearian script, teachers need to be prepared for uncertain practice.

Even so, Wilson and Ball (1996) argue that the basic classroom teaching practices must be learned, as well as the creation and adoption of new images of teaching practice, much of which the authors consider can be developed and practised in schools, learned from mentors or from artefacts of practice (e.g., interactive videos). Finally, pre-service teacher education needs to provide opportunities for learning to reason about teaching practice, which the authors link with the writings of John Dewey.

Corcoran (1994) reports that a key component of the current reform agenda is the desire to shift from a behaviourist approach to teaching, in which students are typically passive recipients of teacher-generated knowledge, to the constructivist approach, in which students are actively engaged in the construction of knowledge. Constructivism as a theory holds that students gain deeper understanding of key concepts and have better retention of knowledge when they are actively engaged in its construction, can weigh it against their prior knowledge, and come to new and

integrated understandings. This process requires the exploration of ideas and phenomena, and the application of new knowledge to authentic problems.

Applications of constructivist theories of how children learn have been a 'leading edge' concern in science and mathematics education for some time. Constructivism was the subject of a heated public debate recently in New Zealand (see e.g., Mathews, 1995; ACCESS, 1995). Constructivist theories have made considerable in-roads into the thinking of teachers in schools. Acceptance that the ideas or conceptual schemes that already occupy children's minds are major determinants of what they will learn, and that learning is a process of social reconstruction, is evidently widespread. The rational extension of this would be to take a constructivist approach to the learning of student teachers in preparation for teaching science ,and mathematics. The adoption of a behaviourist assumption that their assessment should focus only on transparent performance that is prescribed and defined in advance would be, at best, inconsistent. Nor would it be obviously compatible with, say, our understandings of how young people acquire second languages or develop skills of literary criticism.

In traditional classrooms, teachers break down knowledge and skills into small bits. Students are asked to recall bits of information or use specific skills. It is assumed that students will be able to integrate these fragments at later dates to perform more complex tasks. However, because the information often is not presented in the context of real problems, constructivists argue that many students have difficulty remembering, integrating, and applying it. Furthermore, teachers may neglect the misconceptions students hold about the material presented, and these misconceptions may undermine their ability to understand, integrate, retain, and apply it. Advocates of constructivism do not rule out the value of direct instruction or drill and practice. Basic facts must be learned, and the practice of discrete skills has value. The fundamental difference between the behaviourist and constructivist approaches to instruction is a significant shift in emphasis from the memorising of facts to the use of experience to promote understanding and reasoning about concepts.

New curricula are being evolved across many countries, and will affect the requirements of teachers. The following table of comparisons of the skills in the new curricula in four countries is taken from Brown (1996b: 101).

| Australia | UK (NVQ) Core Skills | USA (Scans) Workplace Know-How | New Zealand Essential Skills |
|---|---|---|---|
| Collecting, analysing and organising information | Communication | Information foundation skills (Basic skills) | Information skills |
| Communicating ideas and information | Communication and personal skills (improving own learning and performance) | Information foundation skills (Basic skills) | Communication skills |
| Planning and organising activities | Personal skills (improving own learning and performance) | Resources foundation skills (Personal qualities) | Self-management skills, work and study skills |
| Working with others and in teams | Personal skills (working with others) | Interpersonal skills | Social skills, work and study skills |
| Using mathematical ideas and techniques | Numeracy: application of number | Foundation skills (basic sills) | Numeracy skills |
| Solving problems | Problem solving | Foundation skills (basic skills) | Numeracy skills, decision making skills |
| Using technology | Information technology | Technology systems | Information skills, communication skills |

### Competencies derived from assessment

If assessment has the potential to shape the content and method of what should be taught, it could be seen as a catalyst for shaping teacher competencies. Brown (1996) points out that one of the dominant features of the debate on assessment over the last 35 years or so has been the increasing emphasis on the use of assessment as a support for learning, rather than simply a report of achievement. This has focused attention on formative assessment (or even diagnostic assessment) and on student self-evaluation, and is as relevant to student teachers' learning as it is to that of students in school. It could be argued, therefore, that the provision of profiles of teacher competences would serve the valuable purpose of making teacher educators' assumptions and criteria explicit to student teachers. The latter could then engage in debate about what constitutes good practice in teaching, and in the monitoring of their own progress.

Delandshere (1996) argues that assessment of teaching practices - professional teaching knowledge - requires a new way of defining what constitutes valid knowledge. She argues that a job analysis (such as the QUALSET unit standard approach outlined by McGrath in this review) favours the status quo because it describes current practice, and therefore may not be compatible with improved teaching. Teachers, then, have a role in defining what constitutes valid assessment. Delandshere (1996) further argues that in developing their own understanding and interpretation of the standards, teachers need to construct their own knowledge, create and interpret the curriculum, and examine

their own practice in the light of these understandings. Reformers may be able to mandate minimum standards, but they cannot mandate excellence in teaching.

Delandshere (1996) reports on the current participation by teachers in the assessment of competent teaching in the United States (e.g., the Teacher Assessment Project (TAP) at Stanford), which is being implemented in several ways: (i) the practice of exemplary teachers is analysed to determine the critical aspects of teaching; (ii) teachers participate in the writing of assessment tasks; (iii) teachers have a majority representation on boards and committees in charge of reviewing the assessments; and (iv) teachers serve as assessors in the assessment process. Current assessments of teacher competencies do not consider the role of doubt, questioning, experimenting, or risk-taking as important characteristics of good teaching, and are more often considered as a rite of passage than as an opportunity to continue learning about one's teaching. Teacher assessment, as currently conceived, is a way to look for consistency between established standards and teacher performances, a model that could simply result in the replacement of one set of dogmatic practices with another, with no real change in teaching or learning (Delandshere, 1996).

Within the context of the introduction of the New Zealand government's Achievement Initiative, Willis (1992) argues that there needs to be an integration of assessment reform with teacher development. Teachers require an appreciation of the strengths and weaknesses of different forms of assessment, and familiarity with the ideological and theoretical assumptions underpinning assessment models. This relies on a range of technical skills, including an ability to use a range of assessment procedures, marking and moderation skills.

The National Qualifications Framework (NQF) "challenges traditional thinking and practices about how people learn, who can learn, and where learning should take place" (Hood, 1994b). The NQF is said to have "the potential to change the culture of New Zealand" (Hood, 1994a). The NZQA has confirmed that in secondary schools, "the Qualifications Framework will change the current underlying school structure with the shift in emphasis from course-based learning to student-centred learning" (Martin, 1993). There is, then, a legislated mandate to change the culture of secondary schools.

NZQA has introduced a new approach to assessment through the NQF, which is aimed at developing and maintaining a fair assessment system that measures achievement against clearly stated standards. NZQA (1996) explains that "the Qualifications Framework removes many of the

constraints and assumptions of previous assessment systems" (p. 1). Teachers in accredited schools are registered assessors. "The form of standards-based assessment used in the Qualifications Framework provides a new way to evaluate student performance against unit standards that represent nationally agreed levels of performance" (NZQA, 1996). The assessment requirements of the NQF in New Zealand create new demands on teachers.

In summing up much of the literature to 1984, two New Zealand researchers, Haigh and Katterns, concluded that effective teachers were those who are able to draw upon knowledge from a wide repertoire of teaching modes, as well as their associated skills, to plan and create learning environments that are appropriate for different kinds of learning outcomes; are able to flexibly control a repertoire of strategies and tactical skills that, either as originally planned or as responsive moves, are suitably matched to intentions regarding pupil behaviour and learning; and are sensitive to cues in the teaching-learning situation that signal the appropriateness of sustaining or modifying planned teaching goals and patterns of teaching behaviour.

### Competencies for entry to teacher education

Ramsey (undated) says that recent OECD studies on teacher quality have emphasised that teaching is a cognitive activity and that the best quality teachers possess the ability to think at high-order levels. Academic competency, then, is a critical factor in teaching. But, while empirical evidence is difficult to obtain, there is no question that students of the highest academic ability rarely enter teaching in New Zealand.

After examining the Australian context, Walker (1993) believes that teachers should enter professional teacher training after they have completed an initial broad-based university degree. He suggests that this would provide a basis for flexibility of choice of profession for undergraduates, rather than an early 'locked-in' commitment, and would make professionals all the more flexible on the modern labour market. This policy would reduce the problem where currently providers have no minimum entry level, yet are expected to produce graduates with at least minimum standards. Since students bring with them a history that becomes part of the 'value added' end product, this suggests that competencies have a genealogy and are not altogether determined by the quality of the provider.

Gibbs and Munro (1993) note that the NQF levels assigned by the writers to Teacher Education Standards satisfied only some of the descriptors given in the NZQA levels - definitions that proved

to be inadequate and potentially misleading. Inevitably, their decisions were guided by their professional understanding of the high level of professional discipline, abstractness, cognitive complexity, complex demands and unpredictable nature of teaching.

Decisions about NQF levels and credits are also based on assumptions about the quality of learners in teacher education. The credits assigned to the Teacher Education Standards assume that the student teachers have been selected into teacher education programmes and have met entry requirements that presume they are able to cope with tertiary study.

To be eligible for the University of Auckland's teaching diploma courses, students need to have:

- a university degree; and
- satisfy the university that they are personally suitable for admission and likely to benefit from the training provided by the courses.

Candidates are assessed by the selection committee through interview and in consultation with referees. For the Diploma in Teaching (Secondary), students must meet the academic guidelines for entry to each teaching subject specialty, as outlined in the Diploma in Teaching (Secondary) handbook.

### The United States

Brown (1996) points out that research in the US on learning to teach has been influenced strongly by Shulman's concept of pedagogical content knowledge (PCK). Shulman argues that PCK merits attention as the distinctive kind of knowledge that teachers need in order to transform content knowledge of their subject and make it stimulating and comprehensible to those they are teaching. Brown points to what she considers the most thoughtful collection of papers on current thinking about professional competence in teacher education in the UK (edited by Hustler and McIntyre, 1996), in which neither PCK nor the work of Shulman and his colleagues is mentioned. The split between the US and the UK is curiously marked in this respect.

Shulman's (1987) work is presented here in some length, his ideas being central to a large number of writers on competency in teaching (see the appendix to this volume). His views also appear to be representative of many other writers. Shulman (1987) builds his foundation for teaching reform on the idea of teaching that emphasises comprehension and reasoning, transformation and reflection.

He says that, at a minimum, the categories of knowledge that underlie the teacher understanding needed to promote comprehension among students are:

- Content knowledge;
- General pedagogical knowledge, with special reference to those broad principles and strategies of classroom management and organisation that appear to transcend subject matter;
- Curriculum knowledge, with particular grasp of the materials and programmes that serve as 'tools of the trade' for teachers;
- Pedagogical content knowledge, that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding;
- Knowledge of learners and their characteristics;
- Knowledge of educational contexts, ranging from the workings of the group or classroom, the governance and financing of school districts, to the character of communities and cultures; and
- Knowledge of educational ends, purposes, and values, and their philosophical and historical grounds.

Shulman (1987) argues that among these categories, pedagogical content knowledge is of special interest because it identifies the distinctive bodies of knowledge for teaching. It represents the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organised, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction. Pedagogical content knowledge is the category most likely to distinguish the understanding of the content specialist from that of the pedagogue.

Shulman (1987) also says there are at least four major sources for the teaching knowledge base: (1) scholarship in content disciplines; (2) the materials and settings of the institutionalised educational process (e.g., curricula, textbooks, school organisation and finance, and the structure of the teaching profession); (3) research on schooling, social organisations, human learning, teaching and development, and the other social and cultural phenomena that affect what teachers can do; and (4) the wisdom of practice itself.

Shulman (1987:14) distinguishes between knowledge of subject content and knowledge of pedagogical reasoning and action, which he presents as:

Comprehension:

- Of purposes, subject matter structures, ideas within and outside the discipline.

Transformation:

- Preparation: critical interpretation and analysis of texts, structuring and segmenting, development of a curricular repertoire, and clarification of purposes;
- Representation: use of a representational repertoire that includes analogies, metaphors, examples, demonstrations, explanations, and so forth;
- Selection: choice from among an instructional repertoire that includes modes of teaching, organising, managing, and arranging;
- Adaptation and Tailoring to Student Characteristics: consideration of conceptions, preconceptions, misconceptions, difficulties, language, culture, motivations, social class, gender, age, ability, aptitude, interests, self-concepts, and attention.

Instruction:

- Management, presentations, interactions, group work, discipline, humour, questioning, and other aspects of active teaching, discovery or inquiry instruction, and the observable forms of classroom teaching.

Evaluation:

- Checking for student understanding during interactive teaching;
- Testing student understanding at the end of lessons or units;
- Evaluating one's own performance, and adjusting for experiences.

Reflection:

- Reviewing, reconstructing, re-enacting and critically analysing one's own and the class's performance, and grounding explanations in evidence.

New Comprehensions:

- Of purposes, subject matter, students, teaching, and self;
- Consolidation of new understandings, and learning from experience.

According to Valli and Tom (1988), teachers and teacher educators can use five criteria to evaluate the extent to which conflicting conceptions of the knowledge base actually inform practice: (1) Are the different types of knowledge derived from disciplined inquiry? (2) Are multiple perspectives of teaching and schooling included? (3) Is the interdependence of the technical and normative aspects of teaching explained? (4) Is the framework meaningful and useful to teachers? (5) Does it encourage reflective judgment and action?

**Australia**

Nance and Fawns (1993) present an account similar to Shulman's analysis of a teacher's working knowledge:

- *Understanding*: of purposes, the subject, ideas and their relationships within the subject discipline, and from the educational disciplines.
- *Interpretation*: of ideas understood by the teacher with the intention of allowing the students to be interested in and to understand these ideas. Interpretation employs a repertoire within each of the following contributing processes that result in a planned set of strategies to present a lesson, unit or course.
- *Framing:* the critical analysis of available instructional materials for content coverage purposes, and the structuring, sequencing and dividing of material to be more in line with the teacher's understandings and purposes.
- *Portraying:* the devising of examples, metaphors, analogies, demonstrations, simulations, and concept maps, which may provide a bridge for the student to the teacher's understanding.
- *Producing:* the section from a repertoire of an instructional method that will embody the portrayal.
- *Staging*: the consideration of student characteristics such as age, ethnicity, ability, gender, language, and prior knowledge that will influence their responses to the portrayal and the instructional method.
- *Instruction*: the observation of performance in the classroom. It includes all the acts of management, explanation and discussion in whatever observable form.

- *Evaluation*: this process includes checking for understanding. It is employed during instruction as well as during more formal appraisal to provide feedback and grades in a particular context. This will call upon all the forms of pedagogical content knowledge described above.
- *Reflection*: a retrospective accounting, which may take the form of a re-enactment or story-telling that draws upon evaluations.
- *New understandings*: through the acts of teaching, the teacher achieves new understandings in the areas described above and we have a new beginning.

Nance and Fawns (1993) adapt a model of skill acquisition from Dreyfus and Dreyfus and from Eraut, and apply it to a codification of a teacher's working knowledge:

- Level 1, Novice: A rigid focus on received instructions, plans and methods, very limited perceptual analysis, and no discretionary judgement of levels or requirements, in the areas of working knowledge previously codified.
- Level 2, Advanced Learner: Guidelines for teaching are based on global characteristics of previously experienced methods, subject manner and student attributes, limited perceptual analysis, and the different aspects and attributes of each lesson are treated separately and given equal weight, in the areas of working knowledge previously codified.
- Level 3, Competence: Coping with institutional responsibilities in schools, sets actions at least partially in terms of long-term goals, makes conscious and deliberate strategic plans, uses a highly restricted repertoire of strategic moves in the areas of working knowledge previously codified.
- Level 4, Proficiency: Sees situations holistically rather than in terms of aspects, draws upon own and others' judgement to determine what is most important, can enunciate situational changes and appropriate responses, adopts maxims, guidelines and frameworks for guidance, whose meaning varies according to the situation, uses an extended repertoire of strategic moves, in the areas of working knowledge previously codified.
- Level 5, Expert: Sees the limitations and value in rules, guidelines and frameworks applied to own and others' work, has an intuitive grasp of situations based on deep tacit understanding, commands the analytic approaches to be used in novel situation or when new problems arise, can enunciate a vision of the possible, in the areas of working knowledge previously codified.

Nance and Fawns (1993) note that in their attempt to codify a teacher's working knowledge they put content first, and asked the foundation disciplines to contribute to the teacher's working knowledge in teaching that content.

### The United Kingdom

In the context of a school-based training programme in England for secondary initial teachers, Tomlinson (1995) outlines another account of teaching competence similar to Shulman's.

Explicit knowledge base:

- Subject knowledge and skills, curriculum resources;
- Pupils and pedagogy;
- Professional matters and commitment.

Planning and preparation:

- Clear learning goals appropriate for pupils, context, resources;
- Adequate range of learning activities and resources for pupils.

Interactive teaching:

- Intelligent and effective assistance in pupil learning, organisation and resourcing;
- Effective assessment and monitoring of pupil learning activities and progress;
- Appropriate relating to and influencing pupils, their behaviour, motivation and well-being;
- Effective assessment and monitoring of pupil behaviour, motivation and well-being.

Wider professional roles:

- Wider educational role fulfilment through effective collaboration with others.

Professional self-development:

- Development of explicit knowledge base of subject, pedagogy and professional matters;
- Improvement of professional capabilities through appropriate mentoring, reflection and change.

On the basis of an extensive literature review (from over 170 sources), Reynolds (1992) offers the following list of competencies required of beginning teachers:

- Knowledge of the subject matter they will teach;
- The disposition to find out about their students and school, and the ethnographic and analytic skills to do so;
- Knowledge of strategies, techniques, and tools for creating and sustaining a learning community, and the skills and abilities to employ these strategies, techniques, and tools;
- Knowledge of pedagogy appropriate for the content area they will teach; and
- The disposition to reflect on their own actions and students' responses in order to improve their teaching, and the strategies and tools for doing so.

Reynolds (1992) acknowledges that the research on effective teachers still leaves us with the task of deciding what competent beginning teachers should know and do. She says that at the time of formal summative evaluation for licensing, beginning teachers should be able to:

- Plan lessons that enable students to relate new learning to prior understanding and experiences;
- Develop rapport and personal interactions with students;
- Establish and maintain rules and routines that are fair and appropriate to students;
- Arrange the physical and social conditions in the classroom in ways that are conducive to learning and that fit the academic task;
- Represent and present subject matter in ways that enable students to relate new learning to prior understanding, and that help students develop meta-cognitive strategies;
- Assess student learning using a variety of measurement tools, and adapt instruction according to the results; and
- Reflect on their own actions and students' responses in order to improve their teaching.

### New Zealand

On the basis of intensive field work in New Zealand, Ramsey and Oliver (1995) report on the capacities and behaviours of quality teachers. Key qualities were identified as being characteristic of five quality teachers who were observed in action, and these were then related to their behaviour. Prominent among the findings was the conclusion that these teachers had high cognitive ability, which gave them critical powers of observation, reflection and analysis; they had strong philosophies

of education; they had developed a bicultural approach; and they possessed a strong sense of humour and a well-developed social conscience. Above all, they cared about the learning outcomes of their students. Their approach was child-centred, and they encouraged students to set goals, to review progress, to challenge, and to solve problems.

The five women in the study were found to have four key capacities in common. Critical amongst these was an ability to think clearly and rationally at a high-order level. They were analytical and creative thinkers, who combined disparate experiences in insightful ways, understood the contexts of situations, and had an ability to manipulate the teaching environment. Their level of thinking was evident in their knowledge of substantive curriculum areas and in their ability to sequence instructional materials. The second capacity was that of warmth and compassion, as revealed in a caring attitude towards all the people involved in their work, including colleagues, parents, and of course students. The third capacity was one of determination, where the teachers saw tasks through to a conclusion; they had patience, and they persevered. The final capacity is perhaps best described as a sense of humour. The teachers had the capacity to see the humorous side of things and to develop fun situations in their classroom.

These four capacities gave the teachers a platform on which to develop theories, beliefs and educational philosophies. Their capacities also allowed them to reflect, and to evaluate critically their own, and other people's, ideas about education. They were able to interact meaningfully with children, colleagues, parents and others outside the school setting.

Ramsey and Oliver (1995) point out that quality teachers are supported by quality resources, and user-friendly school environments. Classrooms in the study were modified according to the children's needs. The role of other adults in the educative process, especially care-givers, was acknowledged as being very important. The role of the principal, as a professional leader, and not simply as a manager, was found to be critical. Collegial support, both in and out of school, was apparent, and networking with other teachers and working in professional associations were noteworthy.

Ramsey and Oliver (1995) report that there is an abundance of literature on teaching effects which consistently reveals high correlations between student achievement scores and classroom processes. They say teaching skills do relate to student achievement, that there is support for a direct and structured approach to instruction, and that students achieve highly when their teachers emphasise

academic goals, make them explicit, and have high expectations for their students to master the curriculum. Moreover, students generally achieve more when their teachers carefully organise and sequence their curriculum experiences; when they clearly set out the learning objectives; when they frequently ask direct and specific questions to monitor their students' progress and check on their understanding; when they provide students with ample opportunity to practise by giving prompts and feedback which allows students to practise a skill until it becomes second nature; and when teachers regularly review and hold students accountable for their work.

Ramsey and Oliver (1995) further report that a teacher promotes student learning by being active in planning and organising their teaching, explaining to students what they are to learn, arranging occasions for guided practice, monitoring progress, providing feedback, and otherwise helping students understand and accomplish work. Quality teaching, however, is seen as more than the use of day-to-day teaching skills. There is a growing body of evidence that suggests that student achievement is also enhanced when teachers use certain teaching approaches, and that points to the effectiveness of a variety of innovative teaching practices. The results when teachers use co-operative learning approaches (including peer teaching, ability grouping and democratic grouping) are overwhelmingly positive. It appears that the more co-operative the outcomes (i.e., higher-order thinking, problem-solving, social skills and attitudes), the greater the effects. Ramsey and Oliver (1995) also claim that a number of models of teaching, and especially advance organisers and mnemonics, can affect student achievement substantially and the effects are long-lasting. They argue that non-directed teaching increases student creativity and enhances self-concept, as well as affecting student achievement in such basic areas as recall of information. Finally, they say that when all of the above models and strategies are combined, they clearly have even greater potential for improving student learning.

Quality teachers promote the value of quality classrooms, where students are caught up in learning: excitement abounds, and playfulness and seriousness blend easily because the purposes are clear, the goals sensible, and an unmistakable feeling of well-being prevails.

Ramsey and Oliver (1995) suggest that quality teachers are caring people who have their students' well-being as a high priority. They say there is also evidence in New Zealand and elsewhere that quality teachers are risk-takers and experimenters, and that the schools in which they operate most successfully allow and indeed encourage such behaviour.

Smyth (1996) presents the results of a four-year study involving 250 teachers and principals, which traced the effects of the Australian Advanced Skills Teacher (AST) policy initiative on teachers' work. This initiative required teacher competencies that would deal with what Smyth calls the 'individualist' requirements of recent societal and economic reforms, now manifest in schools. He argues that the view that teaching requires increasing managerialism, tighter specification of outcomes, greater curriculum prescription, more testing of student achievement, and enhanced surveillance, and that schools should be made more competitive, market-responsive, individually accountable and attentive to 'national priorities' - is not eagerly or widely embraced by teachers themselves. Teachers put a different set of priorities on their work - such as interpersonal dimensions (relationships) and intellectual satisfaction.

The previous New Zealand Minister of Education (Smith, 1992) proposed that student learning outcomes, such as exam results, should be one measure of teacher performance, and maintained that there is enough evidence to support such an approach being adopted. In response to Smith, and in particular to the issue of performance-related pay, Annesley (1992) states that no evidence of support for such an approach to measuring teacher performance could be found in her extensive literature review. This, of course, is not saying that teachers do not affect their students. Considerable research has endeavoured to show that teachers do matter (see e.g., Thrupp, 1996, for a discussion of the debate on effective schools). That debate, however, needs to be seen in light of the idea that success at school for the working class

> ... seems largely a matter of chance: a particularly sympathetic teacher, a particularly able child, a mother, father or grandparent able to foster the child's literacy and monitor the school effectively, all of these things can make a difference and prevent them from sharing the fate of most of their peers. Our statistics show this to be not much of a chance (Nash and Harker, 1992: 18).

If Nash and Harker are correct, the idea of performance-related pay, based on competencies that were evidenced in exam successes by students, would be a problematic notion indeed for many teachers in predominantly working-class areas.

Snook (1993) argues that the task ahead in teacher education is not to destroy what we have and start again, but to build on the success of the past. He proposes six separate requirements for teacher

education: (i) knowledge to be imparted; (ii) interpretative studies; (iii) research on teaching; (iv) applicative studies; (v) skills; and (vi) attitudes.

New Zealand's Education Review Office (ERO) (1996) asserts that there are many questions about the quality of pre-employment and in-service professional education and training. It also questions the extent to which the teaching profession as a whole shares a body of commonly accepted theoretical and methodological understandings, adheres to a common code of ethical conduct, and is, in some respects at least, self-regulating.

The ERO has published a number of reports on these issues, and expects that as steps are taken towards a unified pay system, they will become more important. It says that with growing demands for more teachers in more schools to cope with more students, there is a risk that employers may lower the entry hurdles for new staff and be less inclined to put pressure on under-performing staff to improve or leave (especially in already stretched fields such as science).

The ERO asserts that there is also the risk that those offering pre-employment training programmes may dilute the quality criteria for admission and graduation. To some extent, it says, this can already be seen in the structure of new short courses aimed at qualifying as many people as possible to satisfy the demands of boards of trustees. As evidence of this phenomenon, it notes that trainees with only two or three years' high school experience in, say, science, mathematics or the study of language, and no academic degree or other tertiary qualification, may gain only a few weeks' or months' additional training in these fields before graduating from the training institutions and being recruited to the classroom. It is highly unlikely that for those employed in the primary sector, where all classroom teachers must provide balanced programmes of equal quality in each of the seven essential learning areas of the curriculum, such preliminary education will be sufficient.

The ERO regards it as vital that the delivery standards incorporated in all future purchase agreements between the Crown and training providers reflect high-quality expectations, rather than minimalist quantitative requirements that may, at the end of the day, put barely skilled supervisors in school classrooms instead of professional educators.

## Conclusion

The efforts in various countries to define generic and standardised competencies show how quickly and easily they degenerate into what Gibbs and Aitken (1996) call first-order check-lists, with all the

problems inherent in behaviourism. Where the competencies are approached in a broader fashion, there seems to be a greater possibility that the competencies will relate to the uncertain and particular nature of teaching. In their broader definition, then, competencies lend themselves more to professional standards.

# Teacher education standards

Over recent years, a wide-ranging international discourse promoting standards for teachers and teacher education has developed. The issue has also surfaced in New Zealand at the same time.

## The United Kingdom

The Teacher Training Agency in the UK was established in 1994. Its purpose is to improve the standards of pupils' achievements and the quality of their learning through improving the quality of teaching, raising the standards of teacher education and teaching,[1] and promoting teaching as a profession. The Teacher Training Agency (1996) argues for a new look at pedagogy, a diminution of slogans such as 'child-centred', 'chalk and talk', 'negotiated learning', 'teacher-dominated', 'whole class teaching' and 'group work', and a concentration on what it calls the real issues, and the evidence of what constitutes effective teaching. It claims there are three vital things about the pedagogy of the effective teacher. First, effective teachers have a secure command of the material they teach. They understand the material at a level well beyond that being taught, in order to ensure that pupils have sound foundations for the next stages. Teachers are able to make appropriate progress, are sufficiently challenged, and are able to make the links between ideas, both within the subject itself and across related subjects, that are important to effective learning.

Second, effective teachers 'actively teach'. Their range of teaching methods is based on specific objectives for what is to be learned by pupils, and lessons have a clear focus with reasonable targets to be achieved. There are also clear methods of assessing whether learning is effective, both during the lesson and afterwards. At no time is the good teacher not teaching, whether that means providing information, explaining concepts, questioning and challenging, checking understanding, encouraging pupils to research and analyse information, or developing pupils' thinking and learning skills.

Third, effective teachers are said to have high expectations of their pupils, and are able to ensure 'appropriate pace and challenge'. Here teacher expectation is said to be the key to pupil performance. From this perspective, any social, cultural or economic disadvantage that pupils experience can be compounded if, with well-intentioned but misguided motives, teachers are

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[1] See the appendix in this report for an outline of the Teacher Training Agency in the United Kingdom and the standards set out for consultation.

unwilling to add further pressures in the shape of academic demands. It is thought that education must not be merely another aspect of disadvantage, but be seen instead as providing a means of escape from the current socio-economic condition.

The problem with many of these claims is that the same things could be said of ineffective teachers. They too may have a secure command of the material they teach, have high expectations of their pupils, and be very active in the ways described.

Whitty *et al.* (1997) were interested in the extent to which the existence of an official list of competences, which has often been criticised for embodying technical rationality and neglecting more reflective and critical competences, was actually changing the model of the teacher espoused by teacher educators. They found that 46 percent of course leaders adhered to the notion of the reflective practitioner, compared with 57 percent at the time of the previous survey. Meanwhile, those specifically espousing the 'competency' model had doubled, but only to 11 percent. So, even if it was somewhat less dominant than five years previously, 'reflective practice' was still by far the most popular discourse of professionalism within university, college, and indeed school-based courses. Whitty *et al.* (1997) say there are a number of different interpretations of the concept of reflective practice in teacher education.

Yet the use of competences in teacher education courses had increased significantly since the previous survey, well beyond the 11 percent that explicitly espoused a 'competency' model. Indeed, all secondary courses were required to use them at the time of the latest survey, and primary courses were gearing up for the requirement. But how can the use of competences be reconciled with the continuing attachment to the 'reflective practitioner' model?

### The United States

Wise and Liebbrand (1996) report that recently in the US, the National Council for Accreditation of Teacher Education (NCATE) revised its standards to incorporate new knowledge and practice, emphasising performance, new forms of assessment, collaboration with the schools, technology, and diversity - all in the context of high- quality programmes and continuous programme evaluation.

Wise and Liebbrand (1996) say that NCATE now expects a college's teacher candidates to demonstrate specific skills - a departure from the standards in place prior to 1995. Moreover, NCATE's standards are explicit. Teacher candidates should be able to use strategies for developing critical thinking, problem-solving, and abstract reasoning. They should be able to use formal and informal evaluation strategies to ensure continuous student learning. They should be versed in

educational technology, including the use of computers and other technologies for instruction and student evaluation. Prospective teachers should be skilled in classroom management and able to collaborate effectively with parents and others in the community. They should know and use research-based principles of effective practice; that is, they should be able to explain why they decide to use a certain strategy and teach a particular idea a certain way. In short, prospective teachers should demonstrate essential knowledge and acceptable levels of proficiency.

These standards are part of the new model set of licensing standards oriented toward outcomes and developed by the Interstate New Teacher Assessment and Support Consortium (INTASC), under the umbrella of the Council of Chief State School Officers. NCATE has incorporated the work of the Council into the latest version of its accreditation standards in order to integrate reforms in accreditation and licensing.

NCATE standards require the colleges and departments of education to monitor and evaluate the progress of teacher candidates throughout their programme of study, and to use performance assessments as part of the evaluations. Finally, NCATE's standard on 'ensuring the competence of candidates' spells out clearly that the school of education is expected to assess a candidate's competence before the candidate completes the programme and is recommended for licensure, and that this assessment should include actual performance.

Ambach (1996) reports that INTASC is currently engaged in a multi-state effort to craft model licensing standards for teachers that reflect the intent of the standards for students. INTASC's primary constituency is state education agencies, including state departments of education and independent school boards responsible for teacher preparation and licensing. Currently, 36 states and a range of major education agencies are actively involved in the INTASC projects.

INTASC's approach to creating standards is based on a holistic conception of career development for teaching professionals. Thus it aims not only to describe rigorous expectations for beginning teachers but also to lay out the elements of competent entry-level practice in a way that ensures consistency with emerging visions of accomplished teaching. In that way, licensing standards would describe the goals toward which teachers could work throughout their careers to achieve excellence in their profession.

INTASC began its work in 1987 with the vision of competent teaching embodied in the statement of Initial Policy and Perspectives from the National Board for Professional Teaching Standards. Through its standards for recognising expert teachers, the National Board is articulating a model of what constitutes excellence in teaching. INTASC's performance-based licensing standards provide the foundation for professional development throughout a teacher's career. The standards describe essential characteristics of teaching, regardless of the subject, grade level, or students being taught. These core standards were designed to have two important attributes. First, they are performance-based - that is, they describe what teachers should know and be able to do from the moment they enter the profession. Second, they are linked directly to current views of what students should know and be able to do in order to meet new K-12 standards for learning challenging subject matter.

INTASC presented the standards in the form of ten principles, which were further elaborated in terms of the underlying knowledge, dispositions, and performance skills expected of all new teachers. The INTASC model standards for beginning teacher licensing and development are:

- The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students;
- The teacher understands how children learn and develop and can provide learning opportunities that support their intellectual, social, and personal development;
- The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners;
- The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem-solving, and performance skills;
- The teacher uses an understanding of individual and group motivation and behaviour to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation;
- The teacher uses knowledge of effective verbal, non-verbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom;
- The teacher plans instruction based on knowledge of subject matter, students, the community, and curriculum goals;

- The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner;
- The teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally; and
- The teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students' learning and well-being.

Ambach (1996) says that the public response to the 1992 release of the INTASC draft standards for teacher licensing was overwhelmingly positive. Educators, members of state boards, representatives of education agencies, and others who participated in focus groups across the US indicated that the standards represent a broad consensus on what all beginning teachers should know and be able to do. Since that time, 23 states have adopted or adapted the standards to guide their teacher licensing regulations.

The task of shaping performance standards that are clearly understood and that accurately describe competent beginning teaching will not be complete until the standards have been validated by a series of assessment exercises. To make a state licensure decision, the standards-based system envisioned by INTASC would require three kinds of assessments, to evaluate (i) teachers' mastery of subject-area content, (ii) teachers' knowledge and skills essential to teaching, and (iii) teachers' classroom performance. INTASC is currently working on developing prototype assessments for two of these areas.

INTASC has also embarked on the next task in the reform of teacher licensing, which is to provide clear specifications of how the core abilities are manifested in the teaching of specific subject matter. INTASC has translated its core standards into model licensing standards in mathematics, is working on standards in English language and science, and has plans to complete such standards in elementary education, social studies and the arts.

Ambach (1996) also reports on the INTASC Performance Assessment Development Project, a three-year research and development project for states that have an interest in and a readiness to explore a system of performance-based assessments for the licensure and professional development of beginning teachers. Each assessment is structured to provide evidence from real-life teaching

situations that is relevant to the ten INTASC principles. For example, using a portfolio format, one assessment in mathematics asks teachers to provide the following documentation of their practice:

- A commentary that sets the context for instruction;
- Plans that describe tasks, discourse, environment, and analysis of teaching and learning across a series of lessons, as well as plans for each of the individual lessons in the series;
- A more detailed description of two lessons, including expanded lesson plans, videotapes of the lessons, student work, and commentary;
- A formal assessment of student learning across several lessons, including student commentary;
- A commentary in which the teacher reflects on his or her teaching as documented by this assessment, evaluates the work, and identifies areas for professional development; and
- Any additional information the teacher believes represents his or her work as a teacher.

The project is in its second year, and there are extensive plans for a series of research studies to establish the validity, reliability, and fairness of the assessment.

INTASC has begun work on a Test of Teaching Knowledge. This will assess a beginning teacher's professional knowledge and skills in such areas as child development, theories of teaching and learning, and the role of student background in the learning process.

This assessment is expected to be an appropriate test for issuing a beginning (provisional) licence for the first year or two of teaching. It can also be seen as a screen to select candidates for internships. Planning for the assessment instruments has been underwritten by grants from private foundations, while the actual development work is financed by interested states, which will jointly own and have use of the assessments.

Adoption of a standards-based licensing system has significant implications for the preparation of teachers. In such a system, teacher education programmes can no longer assume the adequacy of licensing regulations that focus on such requirements as passing multiple-choice tests or completing a certain number of courses or credit hours. Instead, teacher education programmes ought to be designed to ensure that all candidates have developed a strong foundation of content and pedagogical knowledge, can show the ability to apply this knowledge in practice, and have exhibited the professional behaviours specified by the standards.

## New Zealand

One development under the National Qualifications Framework (NQF) has been *QUALSET: Qualifications Standards for Education in Teaching* (Gibbs and Munro, 1994). The QUALSET project has been a key move in trying to establish teacher education qualifications based on the NQF. The project involves extensive consultation and collaboration with a wide range of participants who share directly and indirectly in the enterprise of primary and secondary teaching. Gibbs and Munro (1994) present a range of assumptions that emerged during the consultative process, the key ones for this review being: teacher education is developmental; teaching contexts and tasks are unpredictable; education is informed by diverse philosophies which imply flexibility; teaching involves complex personal and professional decision-making; teaching involves multiple roles; the outcomes of teaching are the result of interactions; and people in teaching are expected to have special qualities. These qualities are enthusiasm, objectivity, flexibility, adaptability, co-operation, open-mindedness, honesty, assertiveness, approachability, tolerance, patience, and perseverance. The authors recognise that while this claim on teachers is undeniably unrealistic, it is understandable when the extensive responsibilities placed on teachers are acknowledged.

The project, which was first reported in 1993, followed the NZQA path of analysing the field of teacher education to identify the kinds of outcomes necessary for qualifications in the various occupational roles in the field. Some 160 different roles and an equally complex array of outcomes were identified, and became the basis of developing unit standards using the NZQA format. A set of unit standard titles were agreed and endorsed by the Teacher Education Advisory Group (TEAG). Learning outcomes (or elements) and performance criteria, which the learner would have to demonstrate to be credited with the standard, and a specified range of contexts for demonstration, were then written and discussed by TEAG members and their individual advisory and consultative groups.

Some early estimates indicated that 120-150 unit standards would be needed for a three-year pre-service diploma. There was increasing concern at other aspects of the NQF. A number of these concerns are reflected in papers by Irwin (1994) and in Peddie and Tuck (1995).

McGrath (1996) admits that the unit standards concept has been attacked, and employs Irwin's (1995) example in which knowledge, concepts and understandings are broken down into a multitude of discrete elements that are to be mastered separately. Atomisation was the approach of the

American competency-based teacher education programmes of the 1970s, which generated hundreds of competencies.[4] It was soon apparent that the sum of these competencies might not equal the whole of a teacher. After surveying the history of competency in education, Tuck (1995) agrees with McGrath, although he says the labels have been changed and, unlike previous 'competency movements', NZQA is not prepared to be tied down to narrow behavioural or task definitions of competence. McGrath (1996) also argues that the standards developed in the QUALSET work could not be conceived of as 'tiny bits'.

McGrath (1996) reports that there has been difficulty in establishing the meaning of a 'standard' in teacher education. One meaning refers to a quantifiable, precise measure, as used in an athletic or mechanical performance. But 'standard' can have another meaning: the scope of evidence that must be produced in order to enable a professional judgement to be made about a candidate's performance or competence. It is this latter meaning which McGrath says has support in the TEAG discussions.

McGrath's (1996) explanation suggests that teacher competencies derived from standards are interpretable: the question then becomes, which interpretation of standards is to be adopted? Any subsequent interpretation would define the meaning of teacher competency in that instance. Given the uncertain nature of teaching referred to in this review (e.g., Wilson and Ball, 1996; Floden and Buchmann, 1993; Archer, 1983), there will necessarily be considerable interpreting.

Croft (1993) agrees with McGrath, and argues that 'standards' have, for example, been interpreted in the NZQA literature as:

> ... learner's accomplishments (p. 2), assessment criteria (p. 5), efficiency of teaching methods (p. 5), quality of resources (p. 5), agreed outcomes (p. 6), absolute levels of achievement (p. 6), quality (p. 8), consistency (p. 12), and defining standards-based assessment as "assessment which is measured against unit standards" (p. 13), and unit standards as "published learning outcomes statements and assessment criteria" (p. 14). ... It is an interesting speculation as to whether standards within the framework refer to excellence, adequacy, or desirability (Croft, 1993: 11).

This suggests that competence could be about excellence, adequacy, or desirability - all of which are open to interpretation. A definition of competency that rests on the notion of a standard, itself open to a wide range of interpretation, is problematic. The 'competency' discourse is therefore a political

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[4] There is an indication that the Teacher Training Agency in the UK is heading down the same track - see appendix .

one, the term achieving its meaning through the ways it is used in practice. Hence any critical investigation would require a discourse rather than linguistic analysis.

McGrath (1996) points out that other issues raised by teacher educators about the QUALSET work in mid to late 1995 were related to the use of the standards being produced. Given the costs involved, would providers use the standards? At that time, teacher education qualifications would have to be registered on the NQF, so there seemed little chance of avoiding the standards unless the qualification was a degree. Then the NZ Vice-Chancellors' Committee (NZVCC) could, through the Committee for University Academic Programmes (CUAP), approve the qualification, or other non-university providers could seek accreditation for degrees from the NZQA.

McGrath (1996) reports that New Zealand now has a set of about 20 unit standards for teacher education, which will be much broader in scope than the previous set. This position was reached by a needs analysis of outcomes and occupational roles. The approach used to redefine the unit standards was to cull the existing matrix of about 260 titles and to identify a core for all beginning teachers. This approach was therefore based on what were believed to be core standards needed to build a pre-service qualification, rather than building a qualification from the unit standards.

Hall (undated) argues that despite the best efforts of the writers (see e.g., Gibbs and Aitken, 1996), the teacher education unit standards as drafted tend to focus on competencies rather than competence. To a large extent, the focus is required by the form of the NZQA standards. The most acceptable parts of the statements are the unit standard titles, which provide a useful, if somewhat obvious, indication of aspects of the work of teachers that contribute to teacher competence. However, at the level of the elements, and especially the performance indicators, the standards become so detailed that they threaten to reduce competence to a set of competencies. There is a distinct danger that the level of detail in the performance indicators will lead to their acceptance as a set of competencies, which could be used in ways contrary to a more general focus on professional competence.

Hall (undated) also says that of particular concern to universities engaged in teacher education is the restriction of competence to a functional analysis of teaching. Knowledge appears to be valued only to the extent that it is immediately useful, and there seems to be no requirement for the general education of teachers as people. The place of knowledge has created difficulties for TEAG, especially the writers who tried to emphasise the relevance of the knowledge and understanding

underpinning teacher actions when determining the elements and performance indicators. Indeed, it seems that the level of detail in the sets of elements and performance indicators arises in part from attempts to achieve this emphasis. At the heart of the problem lies the fact that the NZQA model is focused almost exclusively on outcomes, and treats initial teacher education as a product or commodity rather than a process.

McGrath (1996) asks, who is responsible for setting standards? The government? The Education Review Office? The employers (or the School Trustees Association)? The profession? The New Zealand Qualifications Authority? His concern is that if teacher educators don't take a lead, it will be left to others to impose their standards.

In practice, however, the politics between the various players may preclude anyone actually taking responsibility. The Teacher Registration Board, for example, refuses to guarantee recognition to students from institutions running new programmes, even though they are NZQA-registered and accredited and delivering NZQA-approved courses. This means that even with valid NZQA qualifications, students in private training establishments will have to wait until the "end of the year to find out if they have passed" (*Education Review*, 15 November 1996, p.3).

The Education Act now requires the Teacher Registration Board to be able to determine that a teacher has satisfactorily completed a period of teaching when renewing a practising certificate every three years. The Board has determined that 'satisfactorily completed' will mean being a 'satisfactory teacher'. The current criteria are applicable to the minimum standards required on first entry to the profession. The new requirements will mean that the definition of a satisfactory teacher will have to cover teachers over a full range of positions and with widely differing years of experience. The Teacher Registration Board's criteria are not to be seen as a checklist for a model teacher, but as an indicator of some of the factors that should be considered in any teacher assessment process.

According to the Teacher Registration Board (1996), a satisfactory teacher is likely to be a person who enables and encourages learning, has competence in the New Zealand curriculum, has appropriate teaching techniques and pupil management skills, plans, prepares and evaluates programmes of work, contributes towards the work of the school or centre as a whole, and promotes health, physical and cultural safety. It also says that a satisfactory teacher is a competent professional who has professional knowledge that will be evident in the planning and preparation that goes into the teaching/learning programme, and the willingness and commitment of the teacher to extend their

knowledge of content and theory throughout their career; who demonstrates the establishment and maintenance of a learning environment, which will be evident in the actual instructional procedures used every day; who demonstrates in a positive way a co-operative role in the learning centre, shares information with colleagues and parents, and respects their position of trust; and displays leadership and is respected for their authority in matters of education.

The role of the Teacher Registration Board could be characterised as the governance of the conditions for the registration and deregistration of teachers, whereas the role of the NZQA is the governance of the production of programmes of instruction for prospective professional teachers, through auditing of the accreditation systems.

The NZQA has based its National Qualifications Framework on a standards-based approach to learning. The Education Amendment Act 1989 empowers the NZQA to set up systems to ensure that student teachers have reached a qualification that is acceptable to the teaching profession. Surely, with an accredited quality system that meets audit standards, this happens when students have completed their assessment. At present, student teachers who graduate from pre-service programmes are given provisional registration. On satisfactory performance, while provisionally registered, they are given full registration. The third element in the registration process is the annual renewal certificate, issued when the school principal evaluates a satisfactory performance.

The question here is, 'what are teachers qualified for if they are not able to be registered once they are qualified?' The answer is, they are qualified to be provisionally registered. But the NQF standard for the student teacher, on completion of the teacher education programme, is the same at full registration as it is at provisional registration.

The NZQA system is standards-based, but the Teacher Registration Board includes demands for morally referenced assessments of character and reputation. There is an issue of control here, as the NZQA does not control the subsequent registration.

The NZQA standards-based evaluation (i.e., auditing) of institutional performance is thus overridden by the Teacher Registration Board's insistence that a judgement of capacity and reputation is fundamental to teacher quality. In other words, the Board employs judgements to override the NQF standards, and therefore the result is not standards-based but a matter of quality, based in part on moral judgement.

Through being defined as 'industry' and a significant 'stakeholder' under the government's Industry Training Strategy, the Teacher Registration Board is a democratic contributor to the teacher education standards-setting process. Under the NZQA regime, the Board would be a contributor to the QUALSET standards. But the Board's registration process (through which it can withhold registration) dominates the NZQA standards-setting processes. The Board's registration requirements are a challenge to the standards-based system, because the existence of their over-arching demands for satisfactory character implies that something more is needed than the NZQA system.

The Ministry of Education funding recognises student participation time, the NZQA recognises standards of performance, and the Teacher Registration Board recognises the character of the individual. From this small comparison, indications are that any incoherence or tension surrounding standards lies in institutional differences, rather than in interdepartmental linkages. If there are to be competency-based standards, then as Ramsey (undated) says, "the situation needs sorting out".

# Trends in teacher education

This section tracks two different international trends in pre-service teacher education. The first is the movement towards university-based professional training after a basic degree-level education, with teaching experience in selected schools. The second is the move towards school-based training.

## The United Kingdom

Jordan and Powell (1995) state that over recent years in the UK there has been a consistent trend in the initial education of teachers, away from the conceptual understandings of the educational process provided by the four underpinning disciplines (psychology, history, philosophy and sociology) towards a skills-based model based on an analysis of teacher competencies. They say there is a move away from teacher education in higher education institutions towards school-based training. They further argue that this shift has given rise to a paradoxical situation in which poor teaching is blamed for the failure in education and yet these same teachers are responsible for the training of the next generation of teachers in order to improve educational standards.

The MOTE study (1997) reported that in England and Wales, the structure and content of initial teacher education have been fundamentally transformed by central government reforms in recent years. As a result, students have to spend more time in schools during their training; schools' responsibility in training has been substantially increased; higher education institutions have to pay schools up to one quarter of their gross income for their contribution to the training process; the content of training has, to a significant degree, been externally defined through a series of government-prescribed competencies; within these government-defined competencies there is a growing emphasis on subject-based knowledge.

In January 1992, the Secretary for Education and Science in England announced that schools should play a much bigger part in initial teacher training as full partners of higher education institutions (McIntyre and Hagger, 1992). The specification was for 80 percent of postgraduate teacher training to be carried out in schools.

The Teacher Training Agency (1997) has recently published its proposed revised requirements for all courses of initial teacher training (ITT).[5] The requirements will, subject to decisions made by the Secretary of State following the consultation, replace those previously published in DFE Circulars 9/92 (secondary) and 14/93 (primary) and DFE teacher training circular letter 1/96 (KS 2/3). These should be read alongside the standards for the award of qualified teacher status.

McIntyre and Hagger (1992) provide an account of a partnership between schools and institutions of higher education through the Oxford internship model of teacher education which, although set up for initial teacher training, also caters for professional development of practising teachers. They argue that the benefit of this scheme is as a vehicle for the professional development of experienced teachers.

The main characteristic of the Oxford internship model of teacher education is a one- year postgraduate partnership between the University of Oxford, Oxfordshire Local Education Authority and its secondary schools. Its key features are: (i) the heavy involvement of each of a limited number of schools, with up to ten interns per school; (ii) a closely integrated school-university programme; (iii) a secure learning environment; (iv) recognition that interns are adult learners and can set their own agendas; (v) a division of labour between university staff and school staff, so that each provides the kinds of knowledge they are best placed to provide; (vi) consensus between university and school is welcomed but not expected; (vii) emphasis on testing all ideas against a wide range of criteria; (viii) two phases of initial professional education; and (ix) a contextualised study of school and system policies and practices. The Local Education Authority has enhanced the staffing of collaborating schools by 0.1 for each pair of interns they accept.

Among the advantages claimed for the internship model are the opportunities it offers for interns to get to know about the policies, practices and concerns of a particular school; to experience at first hand how these impinge on the work of subject teachers; to share understandings and experiences from different subject departments of the same school; and to have the particular school's policies and practices illuminate, and in turn be illuminated by, the study in more generalised terms of important social and educational issues.

McIntyre and Hagger (1992) argue that during the last decade or two, the concept of 'professional development' has increasingly been preferred to such alternatives as 'in-service teacher training' or

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[5] See appendix.

'staff development'. Although this shift does not necessarily imply that practice has changed very substantially, it does demonstrate a recognition of certain important ideas about what is involved in leading experienced teachers to maximise their effectiveness.

McIntyre and Hagger (1992) argue that the first aspect of professional development is that it: (i) rejects the current dominant 'deficit' model of teacher development; (ii) enhances the extension of teachers' existing repertoires, elaboration of existing classroom strategies and understandings, and expansion of existing responsibilities; (iii) promotes development *by* teachers in contrast to that which is done *to* them; and (iv) hopes for a change to something better. Teachers are reported as feeling a new confidence about their own mastery of a sophisticated craft, and recognise that their craft can be articulated in some of its complexity, and so be available not only for sharing but also for appreciation. In addition, for many teachers, beginning to articulate their craft seems to lead on to a search for ways of developing that craft.

The second facet of professional development is the idea of 'professional knowledge'. McIntyre and Hagger (1992) say that in using the term 'professional', they imply there is something distinctive about professional knowledge. They cite Schon (1983) as arguing that there is knowledge embodied in the practice itself, which he calls 'knowing in action' and also 'reflection in action'. Teachers need to be able to assert that they know what they are doing; they not only have the knowledge necessary for teaching but also know what knowledge they are using. The rationale of the internship model depends on experienced teachers being able to articulate the knowledge they use in their teaching in order to share it with interns, and also being able to use that knowledge as a framework against which they can help interns to test the ideas they learn from other sources. Thus internship asks mentors, in the service of their interns, to develop their knowledge-in-action into a consciously considered professional knowledge.

Other aspects of the Oxford programme are: (i) an emphasis on self-critical autonomy/accountability; (ii) collegiality, which provides endorsement from peers; (iii) a supportive environment; (iv) a continuing critique of the context within which the professional development takes place; and (v) teacher involvement in accreditation.

The Oxford internship model of teacher education contrasts with the common theory-into-practice consensual model, firstly because it does not assume consensus, and secondly because it expects ideas to be derived from practice as well as from theory. It contrasts too with the apprenticeship model because, although the wisdom of experienced teachers is viewed as very valuable, it is nonetheless questioned and challenged, and is viewed as one major source of valuable ideas among others.

Whitty *et al.* (1997) studied the origins, nature and effects of the reforms of initial teacher education in England and Wales between 1991 and 1996. Their survey showed that only about 8 percent of courses restricted themselves to using the competences specified in the government circulars, while over 75 percent had chosen to supplement the official lists with additional competences of their own. This was consistent with their fieldwork, which indicated that there was little continuing objection to the idea of competences among course leaders, but only because they felt that reflective competences could be added to the official list in order to sustain a broader definition of professionalism. Course leaders thus appeared able to defend extended notions of professionalism while still conforming to government policy.

Whitty *et al.* (1997) say that many of the higher education staff who had taken a leading role in developing reflective competences (e.g., those teaching Foundations, Current Issues, and Teacher as Researcher courses) were among those most susceptible to early retirement and casualisation in an era of retrenchment. This has made it difficult for many courses to maintain this work in practice. Core teacher education staff in both higher education and schools are increasingly becoming those concerned with curriculum subjects and classroom management.

Whitty *et al.* (1997) say this means that the staff left in teacher education in higher education institutions are often those whose skills are closest to those of school-based teachers, thus potentially undermining any claim for a distinctive role for higher education institutions in teacher education.

Another question in their recent survey asked respondents to choose three words from a list that would best characterise the sort of teacher their course aimed to produce. Despite some resistance to this question, the responses beyond 'reflective', 'professional' and 'competent' were quite varied. However, it was noteworthy that some of the terms that New Right critics often associate with teacher education in higher education institutions - such as 'child-centred' and 'critical' - were among the least popular choices. Whitty *et al.* (1997) wonder if this might suggest a drift towards the more conservative interpretations of reflective practice. They say that in England, there is a wide variation of practice in schools in relation to many issues surrounding teacher education. The shift of more educational and professional studies into schools, with their own 'local' discourses on education, means that the treatment of such areas of work in initial teacher education is already becoming highly variable, not only across different universities and colleges but also across different partner schools of the same university, except where there are strongly collaborative forms of partnership.

### The United States

Howey (1997) reports that the Research About Teacher Education (RATE) study sponsored by the American Association of Colleges of Teacher Education (AACTE) was initiated in 1985. Over the course of the next decade, the research team conducted annual surveys of a representative sample of institutions of higher education who were members of AACTE. While this population changed from year to year, it remained in the range of 700 or more schools, colleges, or departments of education. The descriptive study attempted to collect accurate and reliable data about conditions and trends in teacher education over this period of time. The process began with a conceptual map, which attempted to identify key processes in the preparation of teachers, the contextual elements in which these were embedded, the policies that impacted on practice, and interactions between and among faculty and students, both within the formal programme and the institutional milieu that enveloped them.

Thus many schools and colleges of education are working with schools where the challenges are the greatest. Almost half of those responding reported that specific structural conditions for institutional co-operation have been initiated with elementary and secondary schools in the form of specially designated 'partnership' or 'professional development' schools.

Howey (1997) also says that to paint a largely positive picture would be misleading. The intent of the RATE study was to portray an accurate, and what the research team believed was generally a balanced perspective. But in many instances the financial support and resources for desired changes were simply not forthcoming. While limited resources had been generated for programme improvements internally, funds for working more closely with those in elementary and secondary schools were rarely reported.

In the RATE project, only about one in five faculty members (22 percent) reported that a systematic design for research into or evaluation of teacher education programmes had been achieved at their institutions. As with teaching in elementary and secondary schools, teaching in programmes of teacher education remains largely an individual and private affair. Sophisticated laboratories on campus, in which prospective teachers can inquire into the subtleties and complexities of teaching and learning at a convenient time, reasonable pace, and in a critical, controlled manner, are all but non-existent. The use of cases, video protocols, and simulated activities, engaged in repeatedly and over time to incrementally develop teachers' reasoning abilities, remains basically a foreign concept.

The RATE project reports that although elementary and secondary schools continue to solicit the best of the teacher education faculty, only about four in ten faculty (39.5 percent) report that they have made a major contribution to these schools. The percentage of faculty who report that the elementary and secondary school personnel contribute in a reciprocal manner and in substantial ways to the reform of pre-service teacher preparation is considerably less, and this is a major concern. While the number of professional development and partnership schools is growing, they are typically only in the beginning stages. Teacher education faculty spend more time in these schools and devote more attention to prospective teachers, but the goals of collaborative inquiry, improved continuing professional development, and the evolution of a culture enabling and sustaining professional collegiality are yet to be achieved in most instances. Again, there is repeated testimony to the challenges of sustained professional co-operation.

Finally, Howey (1997) reports that in a time when there remains considerable pressure to privatise schools, little attention appears to be given to the mission of public schools in the increasingly stratified US society. He argues that little moral leadership from higher education can be ascertained in underscoring the critical role of public education in redressing matters of social injustice.

According to Dilworth and Imig (1995b), in the past decade the literature has focused attention on reconceptualising the manner in which prospective teachers are taught. New formats for their development have emerged, not the least of which are 'professional development', 'partner', or 'clinical' schools designed to train prospective teachers, nurture novice ones, and refresh seasoned teachers on the school site (Darling-Hammond, 1994). Mentoring programmes pair novice teachers with outstanding experienced teachers who can explain school policies and practices, share methods and materials, and help solve problems. Mentors may also guide the professional growth of new teachers by promoting reflection and fostering the norms of collaboration and shared inquiry (Feiman-Nemser and Parker, 1992).

Further, according to Dilworth and Imig (1995b), societal issues such as crime, drug and alcohol abuse, poverty, homelessness and child abuse have also influenced how teachers practise and the nature of their training. It is becoming increasingly evident to many educators that greater collaboration among social service providers is necessary in order to meet the first National Education Goal - that all children in America will start school ready to learn - and to ensure effective academic careers for all students. Consequently, there are a number of comprehensive service or

cross-professional training programmes under development which involve schools of education, medicine, law, nursing, criminal justice, and social work.

Dilworth and Imig (1995) say that the designation of teacher education and professional development as one of the National Education Goals (added to the original six in mid-1994) is recognition that well-prepared teachers are essential to educational reform efforts. By the year 2000, the nation's teaching force will have access to programmes for continued improvement of their professional skills, and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.

The National Education Goals suggest that practising teachers are crucial to the transformation of schools, and that in order for teachers to lead the reform efforts, they need to be offered expanded and enriched professional development experiences. Such experiences are to be tied directly to the emerging student performance standards, and be continuous, site-based, teacher-designed, and organisationally focused. Professional development programmes with these characteristics have to be viewed as essential activities that are less vulnerable to budget cuts.

Professional development is an integral part of current efforts to transform and revitalise education. The promise of a high-quality education for all children is dependent not only on a total restructuring of schools, but also on the knowledge and commitment of practitioners to restructuring. As Lieberman and Miller (1990a) see it, for school restructuring to occur, a combination of factors must be present at the same time and over time - including leadership, a shared mission, school goals, necessary resources, the promotion of colleagueship, and the provision of professional growth opportunities for teachers.

Although education reform initiatives offer great promise, researchers suggest that they also pose significant challenges to teachers as individuals and as members of a wider professional community. According to Little (1993), one test of teachers' professional development is its capacity to equip them individually and collectively to act as shapers, promoters, and well-informed critics of reform. At the same time, Little cautions against loading the full responsibility for implementing education reforms onto teachers. She has identified five areas as being integrally tied to enhanced teaching and therefore essential to professional development: reforms in subject-matter teaching; equity for diverse student populations; changes in the nature, extent, and use of assessment; the social

organisation of schools; and the professionalisation of teaching. Each suggests the need for teachers to gain new knowledge and enhanced skills.

Smylie and Conyers (1991) contend that rapid changes in the characteristics, conditions, and learning needs of students will continue; that knowledge about teaching and learning will expand dramatically and that schools will face ongoing pressures for accountability and reform. They conclude that these conditions will create unprecedented demands for the development of teachers' knowledge and skills.

The National Commission on Teaching and America's Future[6] has adopted the position that American students are entitled to teachers who know their subjects, understand their students and what they need, and have developed the skills required to make learning come alive. However, based on its two-year study, the Commission identified a number of barriers to achieving this goal. They include low expectations of student performance; unenforced standards for teachers; major flaws in teacher preparation;. slipshod teacher recruitment; inadequate induction for beginning teachers; lack of professional development and rewards for knowledge and skill; and schools that are structured for failure rather than success. They offer five major recommendations to address these concerns and accomplish their goal.

1. Get serious about standards, for both students and teachers:
    - Establish professional standards boards in every state;
    - Insist on accreditation for all schools of education;
    - Close inadequate schools of education;
    - License teachers, based on demonstrated performance, including tests of subject matter knowledge, teaching knowledge, and teaching skill;
    - Use National Board standards as the benchmark for accomplished teaching.
2. Re-invent teacher preparation and professional development:
    - Organise teacher education and professional development programmes around standards for students and teachers;

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[6] http://www.tc.columbia.edu/-teachcomm/BRIEF5.HT. See also Darling- Hammond (1996).

- Develop extended, graduate-level teacher preparation programmes that provide a year-long internship in a professional development school;
- Create and find mentoring programmes for beginning teachers, along with evaluation of teaching skills;
- Create stable, high-quality sources of professional development.

3. Fix teacher recruitment and put qualified teachers in every classroom:
   - Increase the ability of low-wealth districts to pay for qualified teachers, and insist that districts hire only qualified teachers;
   - Redesign and streamline district hiring;
   - Eliminate barriers to teacher mobility;
   - Aggressively recruit high-need teachers and provide incentives for teaching in shortage areas;
   - Develop high-quality pathways to teaching for a wide range of recruits.
4. Encourage and reward teacher knowledge and skill:
   - Develop a career continuum for teaching, linked to assessments and compensation systems that reward knowledge and skill;
   - Remove incompetent teachers;
   - Set goals and enact incentives for National Board Certification in every state and district. Aim to certify 105,000 teachers in this decade, one for every school in the United States.
5. Create schools that are organised for student and teacher success:
   - Flatten hierarchies and reallocate resources to send more dollars to the front- lines of schools: invest more in teachers and technology and less in non-teaching personnel;
   - Provide venture capital in the form of challenge grants to schools for teacher learning, linked to school improvement and rewards for team efforts that lead to improved practice and greater learning;
   - Select, prepare, and retain principals who understand teaching and learning and who can lead high-performing schools.

The National Commission points out that in contrast to the traditions of US education, other countries have structured teachers' preparation, responsibilities, and ongoing professional development quite differently. Based on greater investments in teachers' knowledge and abilities, many countries tend to hire fewer administrative staff and specialists and more teachers, who take on a broader range of decision-making responsibilities. As a consequence of these hiring patterns, teachers also have more time during each week for professional development activities, work with colleagues, and meetings with parents and individual students.

In order to help the school governors throughout the United States shape education policies that will enable the states to reach the National Education Goals, the National Governors' Association has been providing them with information about policy issues related to systemic reform. One of these issues is professional development for teachers (Corcoran, 1994).

Corcoran (1994) says the terms 'professional development', 'staff development', and 'in-service education' are often used interchangeably to refer to activities in which teachers learn their craft. However, there are subtle differences in their meanings with regard to the content, form, location, initiation, and control of the activity. 'In-service education' and 'staff development' are used here to refer to those formal opportunities for learning provided by school districts and other agencies that are part of the public education system. 'Professional development' is taken to be a broader, more inclusive term referring to the full range of activities that affect how teachers learn how to teach, and how they mature intellectually and professionally.

Corcoran (1994) says that until recently, if state policymakers addressed issues pertaining to professional development at all, it was probably in conjunction with increasing requirements for re-certification, the identification and retraining of ineffective teachers (requiring districts to increase the number of their in-service days) or some combination of these initiatives. Similarly, at the local level the focus has been on the quantity of staff development provided rather than the quality of the activities, their linkage to school goals, and their effects on teaching and learning. The creation of an effective mix of incentives and opportunities requires that policymakers first be clear about the problem they are trying to solve. They must also give attention to the quality and character of the experiences provided for teachers. Of concern is the efficient use of resources, how to leverage additional resources, and how to make full use of the available opportunities and the expertise already in the system.

Corcoran (1994) also says there are alternatives to the regime of in-service conferences and workshops that most teachers experience as their primary form of professional development. These alternatives are more consistent with the principles proposed earlier, and potentially may be more effective in supporting the reforms sought by state policymakers. Among these 'new' approaches to professional development are team teaching, teacher networks and subject-based collaboration between universities and districts, professional development schools, hands-on participation in curriculum development and assessment programmes, preparation for National Board certification, teacher participation in research on instruction and learning, and telecommunications networks that support professional exchange.

On the basis of a literature review, Corcoran (1994) lists some general principles of good professional development. Effective professional development is likely to be that which stimulates and supports site-based initiatives; supports teacher initiatives as well as school or district initiatives; is based on the knowledge base about teaching; offers opportunities for teachers to broaden and deepen their subject matter knowledge; offers teachers opportunities to be active learners; offers intellectual, social and emotional engagement with ideas, materials, and colleagues; demonstrates respect for teachers as professionals as well as adult learners; provides sufficient time and follow-up support for teachers to master new strategies and content, and integrate them into their practice; and is accessible and inclusive.

### Europe

According to Darling-Hammond (1996a), in some parts of Germany prospective teachers earn the equivalent of academic majors (sometimes even master's degrees) in at least two disciplines prior to undertaking two additional years of rigorous teacher preparation, which combines pedagogical seminars with classroom-based observation and intensively supervised practice teaching. For German elementary school teachers, a five-year programme of preparation is required, most of which is spent on the study of teaching and learning; for secondary teachers, a six-year programme is required. Preparation in Luxembourg is a seven-year process, including and extending beyond the baccalaureate degree to professional training. In France, new models of teacher education send candidates through a five-year programme of undergraduate studies and teacher education, leading up to an intensively supervised year-long internship in schools similar to the newly-launched (but not yet widespread) professional development schools in the US. In these countries, teachers are

almost never hired without full preparation, a practice enabled by subsidies that underwrite teacher preparation and salaries comparable to those in other professions.

Norman (1995) states that if one can discern any common trend in the changing pattern of initial teacher education throughout mainland Europe, it would be its increasing incorporation into the university sector, along with the recognition that teachers need a thorough professional training, with a solid theoretical base to complement the hands-on of practice. After a detailed examination of teacher training and the regulatory conditions within which it is embedded, Norman (1995) reports that the French and German systems are moving in different, even opposite, directions to the English and Welsh. While the French are strenuously attempting to increase the participation of universities in teacher education, England and Wales are in the process of marginalising them. The Germans retain a high degree of academic excellence, plus a professional training of a suitable length, rigour and practical quality. The role of theory is acknowledged and respected in the European model, but regarded with suspicion and as something of an irrelevance in the English and Welsh. However, the notion that subject competence is the same as professional competence, which persists particularly in the grammar school sector, remains a feature of a somewhat static German system. Both the French and the German systems grant high status to their teachers, and invest accordingly in their pre-service training: five years in France, and a minimum of six years in Germany. In England and Wales, as a rule, it is four years. Norman (1995) says that there appear to be no comparable systems of competences in France and Germany, where traditions of academically rigorous subject expertise continue to exert a stronger influence, and professionalism tends to consist of ensuring that teachers have adequate conceptual equipment as well as practical competencies. These systems have, he suggests, a shared understanding of the effective, rather than the competent, teacher.

Floden and Buchmann (1993) argue that concern for coherence in European teacher education is fuelled by changes in political organisation and teacher mobility. 'Coherence' is a value-laden concept, yet its meaning is unclear. In the US, advocates of coherence assume that a tightly connected set of experiences is needed to give teacher education programmes sufficient power. The difficulties with 'programme' and 'coherence' in the North American context are suggested by their historical associations with behaviourism and the pursuit of efficiency. Single-minded planning for

particular programme effects may crowd out other goals and compromise the idea of educational progress.

In an earlier paper, Buchmann and Floden (1991) point out that part of the attraction of 'coherent programmes' derives from the positive value tacitly assigned to 'coherence'. 'Coherence' denotes connectedness, which in turn suggests consistency and harmony among elements. In current North American discussions of teacher education, 'coherence' is typically treated as a characteristic of major importance, or even as the primary indicator of curriculum worth. Teacher education is typically 'fragmented', and the authors argue that a new challenge is the need to provide curricula that are coherent. At present, they say, professional studies are rarely interrelated or coherent, so that students wander about rather than progressing systematically through their programmes.

Buchmann and Floden (1991) cite Joyce and Clift, who propose substantial changes in what they perceive to be a fragmented, often meaningless curriculum for prospective teachers. Their goal is to promote a united sequence of experiences. Buchmann & Floden (1991) further argue that the call for coherence in North American teacher education may spring from a fear that formal preparation leaves few traces. They cite Buchmann and Lortie, who point out that scholars of all persuasions conclude that teachers go through their preparation relatively untouched, relying instead on common sense and their experience of schooling. Given these prior teacher learnings, a fragmented curriculum is likely to have little or no effect.

From its descriptive interpretation as 'connection' to its value-laden interpretations as 'harmony' and 'wholeness', the attractions of coherence derive from what it seems to promote, as well as what it may help to avoid. By enhancing order, continuity, and the compatibility of parts in a pattern, 'coherence' would seem to lessen the chance of ideas and experiences decomposing into disparate, meaningless bits, their worth and formative power eroding accordingly.

As an antidote to relying on coherence as a panacea, Floden and Buchmann (1993) suggest that many aspects of teaching reveal it to be an activity imbued with uncertainty. Teachers are frequently unsure of their students' knowledge and understanding, of the effects of their instructional strategies, of the most appropriate content to cover in their limited time with students, and ultimately of their own intellectual and social authority. Initial inclinations to reduce teachers' uncertainty through the introduction of routines or through more extensive subject matter study may be misguided, however; whereas too much uncertainty may promote anarchy, too little uncertainty may engender

dogmatism. Teacher educators might instead consider introducing their students to the myriad uncertainties they will face in their work, assist them in learning to judge when it may be desirable to increase certainty, and encourage them to view remaining uncertainties as an essential driving force in teaching.

Because residual uncertainties of teaching are largely neglected in teacher education, Floden and Buchmann (1993) explore what it would mean to prepare teachers for uncertainty. Teaching is uncertain: no teacher can be sure how a lesson will go or exactly what a student will learn. No one can know which teaching approach will guarantee success for particular groups of students. While casual observation and systematic research indicate the importance of multiform uncertainties to the ways teachers think and feel about their work, little has been published about the stance teacher educators should take towards uncertainty. Writings about teacher education stress how much teachers can learn. Reviews of the literature describe the 'knowledge bases' of teaching. Essays advocate knowledge and skills for effective instruction or working with diverse students.

The single-minded pursuit of a particular change in belief or behaviour may, however, crowd out other defensible aims and compromise the idea of educational progress. Clearly, the competencies involved here are understanding the uncertainties about teaching, learning and classroom authority. Once again, flexibility, openness and tolerance are recommended.

Floden and Buchmann (1993) say that many objections have been raised to views of teacher education as technical training. Especially germane here are arguments that teachers do not spend enough time in their initial preparation mastering all aspects of defensible approaches to teaching. Hence, teacher education should be treated as the beginning of a learning process: it must allow novices to explore a range of ideas and practices under guidance, rather than to acquire the limited set of knowledge and skills they can master in the available time.

Floden and Buchmann (1993) also question whether future teachers are best served by having all connections laid out for them. Again, this may be feasible and appropriate for some kinds of technical training. But if people are to learn how to solve everyday teaching problems, they need practice in figuring out how different elements in a situation that calls for action—even those appearing disjunct—can be considered jointly and made to work together.

Floden and Buchmann (1993) say that practical wisdom depends on bringing many different concerns to bear on a situation. While it is true that those who know a little bit about a lot of things don't understand anything, those who are trained to act on one perspective may not even know that they have one. When this is applied to future teachers, the risk is that the first group will fall back on personal preference, common sense, and experience. Yet with the second group, the danger is that they will stick to a party-line which—derived from current fads and quasi-scientific dogma—may not even have the saving grace of common sense and personal meaning.

### Canada

The Ministry of Education and Training in Ontario (1995) has identified teaching as one of the four 'engines of change' to reform the education system. To help them meet the challenge of preparing students for life in a rapidly changing world, teachers must be given opportunities to maintain and improve their knowledge and skills. In Canada, the need for changes in teacher education has been the focus of several important studies, and teacher education reforms are being undertaken in at least five provinces other than Ontario. To ensure that teachers continue to be well prepared for the many challenges they face in the classroom, and that they keep their knowledge and skills up to date, the Ministry has established the Ontario College of Teachers, an independent body that will regulate the teaching profession. In addition, it has introduced a revised two-year teacher education programme, and new standards for teacher education and accreditation, as well as other changes designed to improve the quality of teacher education.

The Ontario College of Teachers is developing standards of practice for the teaching profession, procedures for certification, and a provincial framework for professional development to promote continual improvement and raise the level of commitment and expertise within the profession, by:

- increasing the teacher education programme to two years (post-first degree). The revised two-year programme will give student teachers more classroom experience, so they can better integrate theory and practice.
- requiring all new teachers to pass a qualifying examination in order to be certified, and all practising teachers to renew their certificate every five years by participating in ongoing professional development activities. These activities will enable teachers to maintain and

improve the knowledge and skills they will need in order to be effective teachers in an environment of constant change.

The Ontario College of Teachers takes part in and oversees the reform of teacher education, governs the teaching profession, and responds to public complaints. It reports annually to the Ministry and the public on its activities. Members of the College's governing body include teachers from both English- and French-language schools; parents; students; staff of faculties of education, school boards and the Ministry; and representatives of the private sector. An implementation committee advised the Ministry on the process of establishing the College and defining the terms of its mandate.

The College is responsible for:

- developing the two-year teacher education programme;
- determining the programme outcomes for the new two-year teacher education programme. The outcomes identify the knowledge, skills, and attitudes that teachers must have when they enter the profession;
- accrediting teacher education programmes;
- developing clear standards of practice for the teaching profession. The standards identify what teachers in Ontario schools should know and be able to do throughout their careers. The standards apply to all educators who are certified to teach in Ontario, including principals, superintendents, directors of education, professors at faculties of education, and Ministry staff;
- designing a provincial framework for the professional development of teachers. The framework applies to all teachers and other people holding an Ontario Teacher's Certificate, including principals, superintendents, and directors of education. Teachers are required to participate in ongoing professional development activities to maintain and improve the knowledge and skills identified as priorities by school boards, the province, and the College;
- overseeing the promotion of leadership skills for principals and supervisory officers.

In June 1994, the Faculty of Education at the University of Toronto (FEUT) approved a two-year programme model. They claim that the model is consistent with the initiatives of the New Foundations of Ontario Education. It is developmentally organised within an integrated, coherent, yet flexible structure, and involves student cohort and staff teams (school-based and university-based

teacher educators) working in partnership in professional development schools (clustered into academies). The model adopts an intellectually rigorous approach to theory generation and application. It includes focused and extended time in classrooms and schools, and stresses such areas as assessment, equity, and information technology and their interaction with learning, teaching, and teacher and school development. The entrance requirement, with minor exceptions, is an appropriate four-year Toronto University bachelor's degree, or its equivalent from a recognised university.

### Australia

Nance and Fawns (1993) state that in Australia the policymakers are attempting to define teachers' working knowledge in terms of competencies, which will form the foundation of award restructuring both for teachers' careers and for their students in industry. In the quest for increased national productivity, generic competencies may be mandated in an attempt to improve the quality of teaching. The training element in teacher education is being reviewed, and the tension between the industrial training model and programmes supportive of the reflective practitioner is being delineated. The key issue that emerges is the need to reconnect competence and knowledge in foundation studies.

Nance and Fawns (1993) argue that current teacher training courses in Australia do share important common features with competence-based training models. A large portion of the course is devoted to on-the-job training. Competence is assessed by direct observation of job performance. This assessment constitutes the largest and most essential part of the qualification. Nobody is allowed to qualify who is not judged to be competent in the workplace, regardless of their intellectual attainment.

A Ministerial Statement (Beazley, 1993) reports that in 1992, the then Department of Employment, Education and Training (DEET) [now 'Department of Employment, Education and Training and Youth Affairs' (DEETYA)] issued a discussion paper to focus attention on teacher education issues. The paper and the responses to it have identified that the effectiveness of teacher education courses depends on a strong partnership between universities and schools. The government values the role of universities in teacher education, not least because of their responsibility for keeping teaching practice at the forefront of knowledge in terms of both pedagogy and traditional academic disciplines.

Beazley (1993) acknowledged that the difficulty some teacher education programmes and teacher educators faced in maintaining the relevance of their courses could be remedied through improved links with schools and school systems. It was considered that the best teacher education programmes throughout the country were in institutions that maintained strong relationships with local schools.

While a great deal of collaboration already existed between schools, universities and systems, it was thought that some teacher education faculties needed to improve their links with schools if they were to provide courses of the highest quality. Such co-operation could take place in a variety of ways. Several responses to the discussion paper supported a more school-based focus for pedagogical development. Others drew attention to the number and diversity of teacher education programmes that incorporate school-based training to enhance to theoretical training. Some submissions expressed reservations about the introduction of competency-based training for teacher education programmes, and raised concerns about the possible reintroduction of an apprenticeship model for teacher training. Responses indicated that competency standards might be difficult to implement, and might tend to trivialise the role of teachers. The government acknowledged these concerns, and the Ministerial report said it would not support an apprenticeship model for teacher education.

However, the report stated that the government did not see teacher education as antithetical to a competency-based approach. Of utmost importance, it said, was ensuring that the issue of competency standards was widely debated throughout the profession.

The provision of teacher education, and initial and ongoing professional development, remains somewhat fragmented and unstructured. While diversity among universities is clearly a strength to be retained, the government believes that the provision of teacher education must be of a consistently high quality.

Those universities that provide teacher education programmes are said to play a pivotal role in creating an environment in which the appropriate mix of teaching and research is conducive to the development of high-quality teacher education programmes. There are, however, key principles that underpin the provision of teacher education courses and will continue to be central to that provision over the next decade. In this respect, Beazley (1993) asserted that it is essential that to maintain and enhance:

- a wide diversity of high-quality teacher education courses between universities;
- partnerships between schools and universities that strengthen teacher education programmes;
- the integration of pedagogy, research and discipline knowledge with teaching practice;
- a knowledge base that ensured that Australian teachers were given a strong grounding in their subjects and were exposed to recent developments in the relevant disciplines;
- flexibility within teacher education programmes to facilitate appropriate shifts in the mix of theoretical and practical education;
- closer links between universities and teachers and trainers in their catchment areas, thereby encouraging the development of teacher education courses that were relevant and responsive to their professional needs and career development; and
- recognition by universities of teacher employer needs and the most appropriate ways to respond to them.

The report noted that the government would continue dialogue with teachers and teacher educators on improving teacher education, both pre-service and ongoing professional development, according to the above principles. It would liaise with the Australian Vice-Chancellors' Committee to secure the co-operation of universities in devising improvements in teacher education.

Walker *et al.* (1997) say that in general, there has been a certain tension between professionalising tendencies, stemming from the beliefs, values and practices of people active in universities, professional associations, unions, school systems and some schools, and deprofessionalising tendencies, stemming from economic rationalist beliefs, values and practices. They further add that since the restructuring of the higher education system in 1990, virtually all teacher education has been conducted by universities, and teacher education has been relatively untouched by federal government policy.

Walker *et al.* (1997) state that the broad trends in Australia are clear. The most striking trend has been the lengthening of early childhood and primary teacher training courses. In 1990 the very large majority (over 85 percent?) of commencing students were enrolled in three-year undergraduate courses. In 1994 about half were commencing three-year courses (52 percent of primary, and 42 percent of early childhood), though most of the courses were the first stage of integrated four-year

double-degree programmes (Bachelor of Teaching/Bachelor of Education). In 1998 around 15 percent are expected to commence three-year courses, which are the first stage of an integrated four-year course, with an exit point at the end of the third year in those states where employing authorities accept a three-year qualification. Throughout the period, a four-year standard was common for secondary initial teacher education, though in 1990 and 1994 a small minority (around 5 percent) of students commenced three-year programmes.

### The Asia-Pacific region

A recent cross-national study[7] reports that most OECD countries are extending pre-service education requirements and internships, while also seeking to deepen in-service learning opportunities. The same is true of Asian countries. Australia, Japan, Chinese Taipei, and New Zealand are moving towards five-year programmes of teacher preparation, usually including greater study of teaching and learning, and a sustained and intensive internship or practicum component.

In Japan, where in-service professional development opportunities are extensive, teachers spend between 15 and 20 hours per week in the classroom with their students, and the remaining time working with colleagues on developing lessons, visiting parents, counselling students, and pursuing research, study groups, and other learning activities. Regular opportunities are provided for visits to other schools, half- and full-day seminars provided by teachers, group research projects, ongoing teacher-led study groups in various subject areas, joint planning, and demonstration lessons, which teachers regularly offer to one another. About 5,000 teachers annually are subsidised to visit schools in other countries to look at teaching. By Japanese law, beginning teachers must receive at least 20 days of in-service training during their first year on the job, and 90 days of professional development. Master teachers are released from their classrooms to advise and counsel them.

In Taiwan, candidates pursue a four-year undergraduate degree, which includes an extensive set of courses on child learning, development, and pedagogy prior to a full-year teaching practicum in a carefully selected and supervised setting. In the People's Republic of China, beginning teachers start out after their teacher preparation as apprentices, working with a reduced teaching load, observing other teachers and preparing under the supervision of master teachers. They work in teaching teams for planning lessons and peer observation. In their study of mathematics teaching and learning in Japan, Taiwan, and the US, Stigler and Stevenson note:[8]

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[7] Teaching and Teacher Development Abroad, http://www.tc.columbia.edu/-teachcomm/BRIEF5.HT.

[8] http://www.tc.columbia.edu/-teachcomm/BRIEF5.HT. See also Darling- Hammond (1996).

> [One of the] reasons Asian class lessons are so well crafted is that there is a very systematic effort to pass on the accumulated wisdom of teaching practice to each new generation of teachers and to keep perfecting that practice by providing teachers the opportunities to continually learn from each other (p.46).

In addition to these ongoing opportunities for professional learning, teaching in most other countries is not as bureaucratically organised as it is in the US, either within the teaching force or in terms of specialists and administrators who do not teach. It is not uncommon, for example in Germany, Japan, Switzerland and Sweden, for teachers to teach multiple subjects, take on counselling responsibilities, and teach the same students for multiple years, so that they come to know their students well, both academically and personally. Where similar arrangements for personalising teacher-student relationships have been tried in the US, research shows that student achievement is significantly higher as a consequence of teachers' greater knowledge of students' learning styles and needs, and greater ability to motivate student effort.

# Trends in teacher education in New Zealand

The Ministry of Education (Catherwood, 1997) has allocated more than 8000 equivalent full-time student places for primary and secondary teacher education for 1997. This is an increase of 1,736 over 1996.

From the perspective of a New Zealand teacher educator, Hall (undated) thinks that underlying much of the thinking about teacher competence is the assumption that pre-service programmes should produce fully trained teachers, an idea that has appeal both to members of the profession and to employers, but is at odds with the expectations of graduates in other professions such as medicine and law. He says it seems important to distinguish between the teacher competence necessary to graduate and begin teaching as a novice teacher, and the wider competence and confidence that comes with classroom and school experience. The latter is fully attainable only when novice teachers have had the opportunity to have the full responsibility of teaching their own students, answer for their own professional decisions and demonstrate an ability to learn from the experience. Provision is made for the support of teacher development to continue in the two years of professionally guided service as provisionally registered teachers. He argues we should not be pushed into providing all the nuts and bolts of classroom management prior to graduation; it is more important to produce graduates who are thinking, open-minded, resourceful practitioners.

Scott (1992) argues that in relation to teacher education, there is certainly no ground swell within the teaching profession that would allow any government easily to introduce an apprenticeship scheme. Scott also presents excerpts from a speech made by the previous Minister of Education (Smith, 1992), who said that teachers have a complex task to perform and their preparation needs to be correspondingly complex; their work requires depth of understanding and their education must be correspondingly abstract. But this does not mean a reliance on theory or abstractions alone. Trainee teachers would be enrolled in Colleges of Education to ensure they developed the theoretical knowledge and understandings they need to be effective teachers. However, they would spend the majority of their time in schools.

Munro (1993) points out that concern about the nature of teaching practice in secondary teacher training, and the relationship between institutional and school contributions to that training, have been recurring themes in the recent New Zealand literature. He says the 1979 Department of

Education's review of teacher training sought to encourage co-operation between all parties involved in a search for closer co-ordination between colleges and schools.

Munro (1993) says that personal biography has been shown to provide useful evidence with which to explain aspects of trainees' disposition and classroom behaviour. Much of the case-report evidence suggests that trainees' intentions, teaching styles and their response to issues in schooling are strongly influenced by what they bring with them into training. To ignore this influence is to ignore the fact that by the time secondary trainees enter training, they have experienced a minimum of sixteen years of primary, secondary and tertiary schooling. As a consequence, they have extensive knowledge of the work of teachers and, in particular, of the ways in which teachers in their own past have gone about establishing relationships with them in classrooms. They do not, however, have much information about the role of the teacher. This suggests that limiting teacher training to school-based training may also limit the opportunities for improving teaching.

Lomas *et al.* (1996) elaborate two different ideologies underlying their newly developed three-year degree programme in teacher education at the Auckland College of Education (ACE). They say that a liberal arts programme or component is considered to be a general one, where courses (subject area and depth of study) primarily are chosen by the individual to meet personal aims and goals. This choice often reflects very personal interests, and may represent a desire for a general education—i.e., personal growth and development of the 'rounded' person—rather than preparation for a specific occupation. The student experience can, however, become an idiosyncratic acquisition of largely unrelated fragments, often because of practical difficulties, and this detracts from the positive goals of personal growth. At ACE, the multiple sites of the programme have sometimes resulted in students choosing courses on the basis of convenient timetables and the desire to minimise travel, along with difficulties in accessing large areas of university study due to laboratory and other requirements.

A professional degree, on the other hand, is a specific programme to provide certified entry into a profession; the courses (content area and depth of study) are mainly determined by the provider to meet the aims and goals of the particular profession. It is a preparation for a professional activity with its own area of expertise, acknowledged functions and specific sets of responsibilities. Those engaged in a profession share a strong and well-defined set of common occupational goals, ethics, objectives and values, and a high level of commitment. Thus, underpinning the structure and

delivery of the new degree programme is a unifying philosophy encompassing the aspirations of staff and students jointly engaged in a professional and collegial endeavour. Another significant feature is the centrality of practice in the 'real world of work' of the professional field throughout the period of initial training, as for engineers. The teaching profession in New Zealand embraces the importance of supervised induction periods, once the person is qualified, leading to final certification to practice, as for doctors who enter practice via internship.

The University of Auckland has entered into new initiatives in teacher education in 1997 (School of Education Graduate Handbook, 1997): they are the Diploma in Teaching (primary) and the Diploma in Teaching (secondary), both for graduate students. The university selected 50 students into each diploma programme for 1997. The university argues that its approach to teacher education is unique in New Zealand. The programme is being developed around a formal consortium partnership with a number of primary and secondary schools drawn from throughout Auckland to reflect the diversity of schools in the region. Schools within the consortium have indicated their active support for working with student teachers, and will nominate experienced teachers to co-teach parts of the programme.

The integration of theory and practice will be achieved by interspersing the university components of the programme with opportunities each week for students to observe expert teachers and to receive guidance on their own developing skills and knowledge.

Students who are selected for the Diploma in Teaching (primary) can expect to:

- Learn to teach students aged five years to 12 years;
- Gain the knowledge to teach the seven areas in the New Zealand Curriculum Framework;
- Have an extended period of time in three or four different schools;
- Be members of the staff team at each school.

Students who are selected for the Diploma in Teaching (secondary) can expect to:

- Learn to teach students aged 13 years to 18 years;
- Gain the knowledge to teach specialist areas in the New Zealand Curriculum Framework;
- Have an extended period of time in different schools;

- Be a member of the staff team at each school;
- Get to know the students' parents/caregivers.

# Relating teacher competencies to teacher education

Earlier sections of this review have described the changing social, economic and cultural environment of teaching in New Zealand, analysed the international research literature on the competencies expected of teachers in such an environment, and described the current international trends and best practice in teacher education programmes. A number of references have already been made in this review of the literature to the links between the identification of expected teacher competencies and teacher education programmes. This concluding section synthesises those links.

## The complexity and limitations of competency

Identifying expected competencies for any professional group is a complex activity. A review of over a century's debate with specific reference to teacher competencies leads to the conclusion that there are no universally applicable statements of teacher competencies that are readily translatable into policy on teaching standards and teacher preparation.

Decontextualising the competency-standard-performance chain only results in a technicist approach to competencies and teacher education. The research literature indicates that a sophisticated understanding of teacher competencies requires appropriate theorising and contextualising. Deriving a 'competency checklist' is an inadequate basis for the full professional development teachers require in their complex working environment.

An appropriately contextualised approach recognises the professional maturation of a teacher from 'novice' to 'expert', and that an individual teacher may be at a variety of different points on this maturation scale at any one time, depending on the competency being measured. The literature reveals that competencies are multi-dimensional, not one-dimensional, features of a professional's capabilities.

## A paucity of best practice sites

The review of the literature has identified few examples of teacher education programmes acclaimed as examples of best practice. The Oxford internship model presents an approach to teacher education that explicitly acknowledges the contested nature of teaching practice, and the importance of reflection on practice for further professional development and the enhancement of competencies.

Broadly speaking, there are two different international trends in pre-service teacher education. The first is the movement towards university-based professional training after a basic degree-level education, with teaching experience in selected schools. The second is the move towards school-based training.

### Implications for future New Zealand teacher education programmes

The literature indicates that there is no consensus at present, internationally or in New Zealand, with regard to either the identification of teacher competencies or their development through teacher education programmes. However, some tentative conclusions might be drawn.

The most widespread support is given to statements of generic competencies such as that developed by Shulman (1986 and 1987), and to Schon's (1983) concept of the reflective practitioner as underpinning teachers' professional development.

A generic approach to the definition of competencies, in association with the reflective practitioner model, suggests that a diversity of teacher education provision might be encouraged by the New Zealand government. Indeed, the divergent approaches adopted by the (albeit limited number of) best practice sites would encourage this.

Any policy of encouraging a diversity of teacher education provision would then need to concentrate on identifying entry-level competencies and the legitimate expectations of pre-service and in-service teacher education in developing and extending competencies.

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# Appendix: The proposed revised requirements for all courses of initial teacher training from the Teacher Training Agency in the United Kingdom

Those to be awarded qualified secondary teacher status must, when assessed, demonstrate that they:

- Have a secure knowledge and understanding of the concepts and skills in theirspecialist subject(s) at a standard equivalent to degree level to enable them to teach it (them) confidently and accurately in ks3 and KS 4 and, where relevant, post-16;
- Have, for their specialist subject(s), a detailed knowledge and understanding of the national curriculum programmes of study, level descriptions or end of key stage descriptions for KS 3 and, where applicable, national curriculum programmes of study for KS 4;
- Are familiar, for their specialist subject(s), with the relevant KS 4 and post-16 examination syllabuses and courses, including vocational courses;
- Understand, for their specialist subject(s), the framework of 14-19 qualifications and the routes of progression through it;
- Understand, for their specialist subject(s), progression from the ks2 programmes of study;
- Know and can teach the key skills required for current qualifications, relevant to their specialist subject(s), for pupils aged 14-19;
- Cope securely with subject-related questions which pupils raise;
- Are aware of, and know how to access, recent inspection evidence and classroom-relevant research evidence on teaching secondary pupils in their specialist subject(s), and use this to inform and improve their teaching;
- Know, for their specialist subject(s), pupils' most common misconceptions and mistakes;
- Are familiar with subject-specific health and safety requirements, where relevant, and plan lessons to avoid potential hazards;

- Have a working knowledge of information technology (it) to a standard equivalent to level 8 in the national curriculum for pupils, and understand the contribution that it makes to their specialist subject(s).

Those to be awarded qualified primary teacher status must, when assessed, demonstrate for all subjects, that they:

- Understand the purposes, scope, structure and balance of the national curriculum orders as a whole and, within them, the place and scope of the primary phase, the key stages, the primary core and foundation subjects and religious education;
- Are aware of the breadth of content covered by the pupils' national curriculum across all primary subjects and religious education.

For each core and specialist subject covered in their training:

- Have a detailed knowledge and understanding of the relevant national curriculum programmes of study and level descriptions or end of key stage descriptions across the primary age range;
- Cope securely with subject-related questions which pupils raise;
- Are aware of, and know how to access, recent inspection evidence and classroom-relevant research evidence on teaching primary pupils in the subject, and use this to inform and improve their teaching;
- Know pupils' most common misconceptions and mistakes in the subject;
- Are familiar with subject-specific health and safety requirements, where relevant, and plan lessons to avoid potential hazards;
- Have a working knowledge of it to a standard equivalent to level 8 in the national curriculum and understand the contribution that it makes to the subject.

For English, mathematics and science, have a secure knowledge and understanding of the subject content specified in the ITT national curriculum for primary English, mathematics and science

For any specialist subject(s) outside the core (and science until September 1998), have a secure knowledge of the subject to at least a standard approximating to advanced level in those aspects of the subject taught at ks1 and KS 2.

For any non-core, non-specialist subject covered in their training, have a secure knowledge to a standard equivalent to at least level 7 of the pupils' national curriculum.

There are additional requirements relating to early years (under-5s) for trainees on 3-8 courses. Those to be awarded qualified teacher status must, when assessed, demonstrate that they:

- Have a detailed knowledge of SCAA's "desirable outcomes for children's learning on entering compulsory education";
- Understand how young children learn and how this is affected by their physical, intellectual, emotional and social development;
- Have an understanding of the roles and responsibilities of other agencies with responsibility for the care of young children.

Planning, teaching and class management

This section details the standards which all those to be awarded qualified teacher status must demonstrate, when assessed, in each subject for which they have been trained to teach. For primary non-core, non-specialist subjects, trainees being assessed for qualified teacher status must meet the required standards but with the support of a teacher experienced in the subject concerned, if necessary.

Primary English and mathematics

Those to be awarded qualified teacher status must, when assessed, demonstrate that they have a secure knowledge and understanding of, and know how and when to apply, the teaching and assessment methods specified in the ITT national curriculum for primary English and mathematics. This requirement will be extended to primary science and the secondary core subjects from September 1998.

Primary and secondary

Planning: Those to be awarded qualified teacher status must, when assessed, demonstrate that they plan their teaching to achieve progression in pupils' learning through:

- Identifying clear teaching objectives and content, appropriate to the subject matter and the pupils being taught, and specifying how they will be taught and assessed;

- Setting tasks for whole class, individual and group work, including homework, which challenge pupils and ensure high levels of pupil interest;
- Setting appropriate and demanding expectations for pupils' learning, motivation and presentation of work;
- Setting clear targets for pupils' learning and ensuring that pupils are aware of the substance and purpose of what they are asked to do;

Identifying pupils who:

- Have special educational needs, including specific learning difficulties;
- Are very able;
- Are not fluent in English and knowing where to get help in order to give positive and targeted support;
- Provide clear structures for lessons, and for sequences of lessons, in the short, medium and longer term, which maintain pace, motivation and challenge for pupils;
- Make effective use of assessment information on pupils' attainment and progress in planning future lessons and sequences of lessons;
- Plan opportunities to contribute to pupils' spiritual, moral, personal, social and cultural development;
- Ensure coverage of the relevant national curriculum programmes of study and syllabuses, as appropriate.

Teaching

- Those to be awarded qualified teacher status must, when assessed, demonstrate that they:
- Ensure effective teaching of whole classes, and of groups and individuals within the whole class setting;
- Monitor and intervene when teaching whole classes, to ensure sound learning and discipline;
- Establish and maintain a purposeful working atmosphere;

- Set high expectations for pupils' behaviour, establishing and maintaining a good standard of discipline through well focused teaching and through positive and productive relationships;
- Establish a safe environment which supports learning and in which pupils feel secure and confident;
- Use teaching methods which sustain the momentum of pupils' work and keep all pupils engaged through stimulating intellectual curiosity, communicating enthusiasm for the subject being taught, fostering pupils' enthusiasm and maintaining their motivation;
- Matching the approaches used to the subject matter and the pupils being taught;
- Structuring information well, including outlining content and aims, signalling transitions and summarising key points as the lesson progresses;
- Clear presentation of content around a set of key ideas, using appropriate subject-specific vocabulary and well chosen illustrations and examples;
- Clear instruction and demonstration, and accurate well-paced explanation;
- Effective questioning which matches the pace and direction of the lesson and ensures that pupils take part;
- Careful attention to pupils' errors and misconceptions, and helping to remedy them;
- Listening carefully to pupils, analysing their responses and responding constructively to take pupils' learning forward;
- Selecting and making good use of it and other learning resources which enable teaching objectives to be met;
- Providing opportunities for pupils to consolidate their knowledge and maximising opportunities, both in the classroom and through setting well focused homework, to reinforce and develop what has been learnt;
- Exploiting opportunities to improve pupils' basic skills in literacy, numeracy and it, and the individual and collaborative study skills needed for effective learning, including information retrieval from libraries, texts and other sources;

- Exploiting opportunities to contribute to the quality of pupils' wider educational development, including their spiritual, moral, personal, social and cultural development;
- Setting high expectations for all pupils notwithstanding individual differences, including gender, and cultural and linguistic backgrounds;
- Providing opportunities to develop pupils' wider understanding by relating their learning to real and work-related examples;
- Are familiar with the code of practice on the identification and assessment of special educational needs and, as part of their responsibilities under the code, implement and keep records on individual education plans for pupils at stage 2 of the code and above;
- Ensure that pupils acquire and consolidate knowledge, skills and understanding of the subject;
- Evaluate their own teaching critically and use this to improve their effectiveness.

There are additional requirements relating to early years (under-5s) for trainees on 3-8 courses. Those to be awarded qualified teacher status must, when assessed, demonstrate that they:

- Plan activities which take account of pupils' needs and their developing physical, intellectual, emotional and social abilities, and which engage their interest;
- Provide structured learning opportunities which advance pupils':
- Personal and social development;
- Communication skills;
- Knowledge and understanding of the world;
- Physical development;
- Creative development.
- Use teaching approaches and activities which develop pupils' language and provide the foundations for literacy;
- Use teaching approaches and activities which develop pupils' mathematical understanding and provide the foundations for numeracy;

- Encourage pupils to think and talk about their learning and to develop self-control and independence;
- Encourage pupils to concentrate and persevere in their learning for sustained periods, to listen attentively and to talk about their experiences in small and large groups;
- Use teaching approaches and activities which involve planned adult intervention, which offer opportunities for first-hand experience and co-operation, and which use play and talk as a vehicle for learning;
- With support from an experienced specialist teacher if necessary, manage the work of parents and other adults in the classroom to enhance learning opportunities for pupils.
- Monitoring, assessment, recording, reporting and accountability

This section details the standards which all those to be awarded qualified teacher status must demonstrate, when assessed, in each subject for which they have been trained to teach. For primary non-core, non-specialist subjects, trainees being assessed for qualified teacher status must meet the required standards but with the support of a teacher experienced in the subject concerned, if necessary. Those to be awarded qualified teacher status must, when assessed, demonstrate that they:

- Assess how well learning objectives have been achieved and use this assessment to improve specific aspects of teaching;
- Mark and monitor pupils' assigned classwork and homework, providing constructive oral and written feedback, and setting targets for pupils' progress;
- Assess and record each pupil's progress systematically, including through focused observation, questioning, testing and marking, and use records to:
- Check that pupils have understood and completed the work set;
- Monitor strengths and weaknesses and use the information gained as a basis for purposeful intervention in pupils' learning;

Inform planning;

- Check that pupils continue to make demonstrable progress in their acquisition of the knowledge, skills and understanding of the subject;

- Are familiar with the statutory assessment and reporting requirements and know how to prepare and present informative reports to parents;
- Understand the expected demands of pupils in relation to (for primary) each relevant level description or end of key stage description, (for secondary) each level description or end of key stage description, as well as the demands of the syllabuses and course requirements for GSCE, other ks4 courses, and, where applicable, post-16 courses;
- Recognise the level at which a pupil is achieving, and assess pupils consistently against attainment targets, if necessary with guidance from an experienced teacher;
- Understand and know how to use national, local, comparative and school data, including national curriculum test data, to set clear targets for pupils' achievement;
- Use different kinds of assessment appropriately for different purposes, including national curriculum and other standardised tests, and baseline assessment, where relevant.

Other professional requirements: Primary and secondary.

Those to be awarded qualified teacher status should, when assessed, demonstrate that they have a working knowledge and understanding of:

- Teachers' professional duties as set out in the current school teachers' pay and conditions document;
- Standards of conduct expected of teachers including those aspects of conduct which can lead to a teacher being barred from working as a teacher or with children or young persons (currently set out in DfEE circular 11/95);

Teachers' legal liabilities and responsibilities relating to:

- Health and safety procedures and responsibilities;
- Duty to maintain reasonable care towards pupils;
- Anti-discrimination legislation;
- Child protection, including the children act;
- Detention, physical restraints and chastisement;

- Have established, during work in schools, effective working relationships with professional colleagues including, where relevant, associate staff;
- Set a good example to the children they teach, through their presentation and their personal and professional conduct;
- Understand the need to take responsibility for their own professional development and to keep up to date with research and developments in pedagogy and in the subjects they teach;
- Understand their professional responsibilities in relation to school policies and practices, including those concerned with pastoral and personal safety matters;
- Recognise the need to work closely with parents and other adults in the classroom, and with other agencies and carers;
- Are aware of the role and purpose of school governing bodies.

The key changes from current requirements are:

- Scope for providers to offer subject-specialist key stage 2 courses (7-11 age range);
- Scope for providers to offer early years/key stage 1 specialist courses (3-8 age range);
- Scope for providers to offer 14-19 specialist courses;
- All primary courses, regardless of phase and subject specialisms, to secure coverage of the ITT national curriculum for the core subjects - initially, primary English and mathematics - across the primary age range;
- All primary courses to ensure that trainees have at least one specialist subject;
- All secondary courses in the core subjects to secure coverage of the relevant secondary ITT national curriculum when developed;
- New standards for the award of qualified teacher status which all trainees must achieve before they can qualify to teach;
- Clearer quality assurance requirements, building on current best practice;
- A greater emphasis on the requirement for schools to play a central and active role in training teachers, in partnership with higher education institutions;

- Retention of clear entry requirements for initial teacher training, but training providers allowed greater flexibility in selection arrangements;
- A career entry profile to be given to all trainees who successfully complete a course of initial teacher training and gain qualified teacher status, to provide a basis for monitoring and support during induction.

The Teacher Training Agency (1997: 3) also sets out the entry requirements for all courses of initial teacher training and details selection criteria to be applied by all providers. These are minimum requirements and providers will wish to develop additional criteria.

For all courses of initial teacher training (ITT), providers are required to ensure that:

- All entrants are able to communicate clearly and grammatically in spoken and written standard English;
- All entrants have attained the standard required to achieve at least a grade c in the GSCE examination in mathematics and English;
- All those born on or after 1 September 1979 who enter primary, and KS 2/3 courses of ITT after 1 September 1998, have attained the standard required to achieve at least a grade c in a GSCE examination in a science subject (including combined science). The science qualifications which were approved by the Secretary of State under Section 400 of the Education Act 1996 for the year in which the qualification was awarded are acceptable to meet this requirement. For prospective trainees without standard qualifications, providers should set their own equivalence tests. The TTA will audit samples of tests to ensure that standards are appropriate.
- All entrants meet the Secretary of State's requirements for physical and mental fitness to teach as detailed in the relevant Circular (currently DFE 13/93);
- Entrants have not previously been excluded from teaching or working with children;
- Systems are in place to seek information on entrants' criminal backgrounds which might prevent employment as a teacher or with children or young persons (currently set out in DfE Circular 11/95). Guidance can be found in DFE Circular 9/93;

- Selection procedures include representatives from those centrally involved in the training process, including school staff;
- All trainees possess the personal, intellectual and presentational qualities suitable for teaching; providers should seek evidence of relevant experience with children.

In the case of postgraduate courses of ITT, providers should satisfy themselves that:

- Entrants hold a degree of a United Kingdom university or a higher education institution with degree awarding powers, or a degree of the CNAA, or a qualification recognised to be equivalent to a UK or CNAA degree;
- The content of entrants' previous education provides the necessary foundation for work as a teacher in the phase(s) and subject(s) they are to teach.

For undergraduate courses, in addition to the requirements set out above:

- In the case of two-year courses, providers should satisfy themselves that entrants have satisfactorily completed the equivalent of at least one year of full-time higher education studies. The content of entrants' higher education studies must provide the necessary foundation for work as a teacher in the phase(s) and subject(s) they are to teach..

The Teacher Training Agency (1997: 5) lists the length and coverage of courses which may be offered and the minimum requirements for each type of course. The specified types of course provide a basis for further continuing professional development. It is expected that teachers will continue to develop and broaden the range of their expertise throughout their careers. All providers must:

- Ensure that courses comply with the requirements set out in the ITT National Curriculum for the core subjects. For primary science and the secondary core subjects, the ITT National Curriculum will be developed during 1997 with consultation in early 1998.
- Ensure that courses involve the assessment of all trainees against all the standards specified for the award of Qualified Teacher Status;
- Ensure that trainees meet all the standards specified for the award of Qualified Teacher Status before successfully completing a course of ITT;
- Ensure that all those trainees who successfully complete a course of ITT leading to Qualified Teacher Status receive a career entry profile.

Courses must cover one of the age ranges below:

- 3-8 - these courses must cover specialist training for early years (under 5s), the core subjects across KS1 and KS2 as specified in the ITT National Curriculum, and at least one specialist subject; in addition they must equip trainees to teach across the full primary curriculum in this age range. A specialist subject could be one of the core subjects or an additional subject;
- 3 or 5-11 - these courses must cover the core subjects across KS1 and KS2 as specified in the ITT National Curriculum; must equip trainees to teach across the entire primary age range with an emphasis on 3-8 or 7-11, and must include at least one specialist subject;
- 7-11 - these courses must cover the core subjects across KS1 and KS2 as specified in the ITT National Curriculum and must include at least one specialist subject;
- 7-14 - these courses must cover the core subjects as specified in the primary ITT National Curriculum and a specialist subject at KS2 and KS3;
- 11-16 or 18 - these courses must cover at least one specialist subject;
- 14-19 - these courses must cover at least one specialist subject; the 14-19 qualifications framework, including the relevant KS4 and post-16 examination syllabuses and vocational courses, and the relevant key skills required by 14-19 qualifications.

The minimum amount of time which will be spent on postgraduate courses of ITT is:

- 38 weeks for all full-time primary postgraduate courses;
- 36 weeks for all other full-time postgraduate courses.

The Teacher Training Agency (1997: 7) outlines the requirements for partnership between schools and higher education institutions or other providers, and sets out requirements relating to the involvement of schools, including the amount of time which trainees must spend in schools. For all courses of ITT, all non-school trainers must work in partnership with schools, ensuring that:

- Schools are fully and actively involved in the planning and delivery of ITT, as well as in the selection and final assessment of trainees. The full partnership should regularly review and evaluate the training provided;
- The division and deployment of available resources has been agreed in a way which reflects the training responsibilities undertaken by each partner;

- Effective selection criteria for partnership schools have been developed which are clear and available to all partners and trainees, and which take account of indicators such as OFSTED reports, test and examination results, exclusion rates etc., and procedures for the de-selection of schools which no longer meet these criteria are in place.

The amount of time spent by trainees in schools during their training must be at least:

- 32 weeks for all four-year undergraduate courses;
- 24 weeks for all three-year undergraduate courses;
- 24 weeks for all full-time two-year secondary and KS2/3 undergraduate courses;
- 24 weeks for all full-time secondary and KS2/3 postgraduate courses;
- 18 weeks for all full-time primary postgraduate and two-year primary undergraduate courses;
- 18 weeks for all part-time postgraduate courses.

The Teacher Training Agency (1997: 78) stipulates the arrangements for all courses of initial teacher training which providers must put in place to ensure that training is of high quality, is regularly reviewed and that the award of Qualified Teacher Status is securely based. For all courses, providers must ensure that:

- Trainees are to be given opportunities to observe good teachers at work and to work alongside them; to participate in teaching with expert practitioners in their chosen phase(s) and subject specialism(s), and to undertake substantial and sustained periods of class teaching in more than one school;
- Roles and responsibilities of all those involved in ITT are set out clearly and are available to all participants, including trainees;
- All those involved in the training are aware of their roles and responsibilities and have the relevant knowledge, understanding and skills to enable them to undertake them competently;
- Only those schools and teachers who can offer appropriate training and support for trainees are used to provide ITT;
- The quality of provision across all aspects of the course is of a consistently good standard and complies with all the requirements set out in this document;

- The training process is kept under continuous review to ensure that the training responsibilities always reflect the strengths of those involved, and that the standards and quality of the training process are identified and, where necessary, action is taken to secure improvements;
- The content and structure of courses are designed to develop trainees' knowledge, skills and understanding to ensure that the standards for the award of qualified teacher status are met;
- The competence of trainees is rigorously and regularly assessed in order to evaluate their progress towards achieving the standards required for qualified teacher status and to enable training to be focused on the achievement of those standards;
- Trainees have demonstrated that they meet all the standards set out in the accompanying document standards for the award of qualified teacher status before they are judged to have successfully completed the course;
- Independent, external moderation procedures are in place to ensure that each trainee has met all the standards for the award of qualified teacher status before successfully completing the course.